

*PrimeraPro*TM

C O L O R P R I N T E R

Operating Instructions

Models: 76500 (110/120 VAC)
 76501 (220/250 VAC)
 76502 (110/120 VAC)
 76503 (220/250 VAC)
 76504 (110/120 VAC)
 76505 (220/250 VAC)

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PrimeraPro has had the following patents issued:

5,340,098

5,378,072

5,480,242

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For Users in the United States:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of a shielded cable is required to comply with the Class B limits of Part 15 of the FCC Rules.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate and/or obtain warranty service for this equipment.

For Users in Canada:

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out on the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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A. How Your PrimeraPro Color Printer Works

PrimeraPro utilizes two different, yet closely related printing technologies to achieve its remarkable output—wax thermal transfer and dye-sublimation.

Wax thermal transfer is a process which uses a wax based ribbon roll that is partitioned by a number of consecutive 9" x 14" colored panels. The panels are grouped in a repeating series of three separate colors, Cyan, Magenta, and Yellow (C,M,Y), along the entire length of the ribbon. A fourth black panel (C,M,Y,K) is often added along with the other three colors to achieve prints with a more dense, or "true" black. PrimeraPro always prints the yellow panel first, followed by the magenta panel, the cyan panel, and finally the black panel, if you are using a four-color ribbon.

As the ribbon and paper pass simultaneously beneath the print head, the thousands of thermal elements within the print head melt the waxed-based ink, thus transferring thousands of tiny colored dots from the ribbon onto the paper. The paper makes a separate pass for each colored panel on the ribbon. By combining the different colored dots in different combinations (this process is called "dithering"), PrimeraPro is able to print an almost infinite number of different color combinations.

Dye-sublimation is similar to wax thermal transfer in that it still involves a three color, three pass process beneath the same thermal printhead. The difference, however, lies within the special dye-sublimation ribbon and paper and in the transfer process itself. Unlike the wax thermal ribbon, each colored panel on the dye-sublimation ribbon is composed of a colored dye rather than a colored wax based ink. When the dyes on the ribbon are heated beneath the thermal printhead, they vaporize and diffuse into the surface of the special dye receptive paper. By varying the heat intensity of each thermal element within the printhead, it is possible for each transferred dot of color to vary in hue, thus blending one color into the next. The result? Continuous-tone, photo-realistic color images.

1

Introduction

Thank you for choosing the FARGO PrimeraPro Color Printer.

PrimeraPro has been designed to provide you with stunning, high quality color output on paper, transparency film and even T-shirt transfer paper. It offers many features to make printing full-color charts, graphs, photos, illustrations, and monochrome text very fast, easy and exciting.

B. Special Features

With your PrimeraPro, switching back and forth between these printing methods is easy. All you do is load either the wax thermal transfer supplies or the dye-sublimation supplies and select the appropriate printing choice from within PrimeraPro's software driver. The entire change-over process takes about 15 to 20 seconds.

PrimeraPro will print from any IBM-PC® or compatible running Windows™ 3.1 or higher, any Apple® Macintosh® with system software 6.0.3 or higher supporting Color QuickDraw™, or any Amiga® with system software 2.x or higher. This means that you can use the printer with virtually any software package running under these operating environments without any special set-up or configuration beyond the initial installation of the specific software driver and interface cable. From an IBM-PC, an ASCII print mode is also available for monochrome text-only printing from DOS or other non-Windows applications.

Data is sent to PrimeraPro in a bit-mapped, rasterized format. This means that your computer, along with the printer driver software, does almost all of the complex Raster Image Processing ("RIP") work. So, the faster your computer, the faster the image will be RIP'd and sent to your PrimeraPro.

Your PrimeraPro Color Printer has many distinct advantages over other color printing technologies. With its dual function wax thermal transfer / dye-sublimation color printing capability, PrimeraPro offers you incredible printing versatility. Wax thermal transfer colors are generally brighter and more vibrant than dot-matrix or ink-jet. Cost per page is dramatically lower than ink-jet. And speed is far greater than both of these other color printing methods. In addition, PrimeraPro's dye-sublimation process gives you continuous-tone, photo-realistic output, no other color printing technology can match.

Another advantage lies within PrimeraPro's ability to print either 300 DPI (dots per inch) or 600 x 300 DPI output with either the thermal wax transfer or the dye-sublimation process. Simply by making a selection within PrimeraPro's printer driver setup, you can switch from printing high resolution 300 DPI output to printing astounding 600 x 300 DPI graphics with near-flawless curves and laser quality text.

Operation is simple and straightforward. Within minutes after opening the box and setting up your PrimeraPro, you will be printing high-quality, exciting color output.

Warnings

CAUTION!

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SIDE OR BACK PANELS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Before operating the unit, please read the following safety precautions carefully.

- Operate the unit only on 120 VAC, 50 or 60 Hz. For printers that have been shipped outside of the United States and Canada, the proper voltage transformer (100 VAC or 220/250 VAC) and plug should be furnished with the unit. If you have any doubt as to whether you have the correct power transformer and plug for your country's power supply, **DO NOT ATTEMPT TO USE THE UNIT**. Refer to Section 5 of this manual or contact your dealer or the factory.
- Stop operation immediately if any liquid or solid object should fall into the cabinet. Unplug the unit and have it checked by qualified service personnel.
- Unplug the unit's power transformer from the wall outlet if you do not use the unit for a long time. Disconnect the cord by grasping the plug. Never pull the cord itself.
- The unit is not disconnected from the main power source as long as the power transformer is plugged into the wall outlet, even if the unit itself has been turned off.
- Do not disassemble the cabinet. Refer servicing only to qualified personnel.

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Safety Precautions

Sicherheits- maßnahmen

Machen Sie sich vor
Inbetriebnahme des
Geräts mit den
Sicherheitsmaß-nahmen
gründlich vertra

Sicherheitshinweise

VORSICHT!

ZUR VERHÜTUNG VON FEUERGEFAHR ODER ELEKTRISCHEN SCHLÄGEN DAS GERÄT VOR REGEN ODER FEUCHTIGKEIT SCHÜTZEN. UM DIE GEFAHR VON STROMSCHLÄGEN ZU VERHINDERN, SEITENABDECKUNGEN ODER RÜCKWAND NICHT ABNEHMEN. DAS GERÄT ENTHÄLT KEINE TEILE, DIE VOM BENUTZER GEWARTET WERDEN KÖNNEN. WARTUNGSARBEITEN DÜRFEN NUR VON QUALIFIZIERTEM FACHPERSONAL DURCHGEFÜHRT WERDEN.

- Das Gerät nur mit 120 V Wechselstrom und 50 oder 60 Hz betreiben. Drucker, die außerhalb der USA und Kanada verwendet werden, sollten mit einem passenden Netztransformator (100 V oder 220/250 V Wechselstrom) und Netzstecker ausgerüstet sein. Wenn Sie nicht sicher sind, ob sich Ihr Transformator und Stecker für das örtliche Stromnetz eignen, **DAS GERÄT NICHT IN BETRIEB NEHMEN**. Siehe Kapitel 5 in diesem Handbuch oder wenden Sie sich an Ihren Händler oder den Hersteller des Geräts.
- Den Betrieb sofort unterbrechen, wenn ein Gegenstand in das Gehäuse gefallen oder Flüssigkeit eingedrungen ist. Den Netzstecker ziehen und das Gerät von qualifiziertem Wartungspersonal überprüfen lassen.
- Wenn das Gerät längere Zeit nicht verwendet wird, den Netzstecker des Transformators ziehen. Immer am Stecker, nicht am Kabel ziehen.
- Solange der Transformator ans Netz angeschlossen ist, steht das Gerät unter Spannung, auch wenn es ausgeschaltet ist.
- Keine Gehäuseteile abnehmen. Wartungsarbeiten nur von qualifiziertem Fachpersonal durchführen lassen.

Avertissements

ATTENTION!

POUR EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A LA PLUIE OU A L'HUMIDITE. POUR EVITER TOUTE DECHARGE ELECTRIQUE, NE PAS RETIRER LES PANNEAUX LATERAUX OU ARRIERE. NE PAS TENTER DE REPARER SOI-MEME LES PIECES A L'INTERIEUR DE L'APPAREIL. CONFIER L'ENTRETIEN DE L'APPAREIL A UN PERSONNEL QUALIFIE.

Consignes de sécurité

Avant d'utiliser l'appareil, prière de lire attentivement les consignes de sécurité suivantes.

- Faire fonctionner l'appareil uniquement sur courant alternatif de 120 V, 50 ou 60 Hz. Les imprimantes expédiées en-dehors des Etats-Unis et du Canada sont accompagnées d'un transformateur de tension (100 VCA ou 220/250 VCA) et d'une fiche appropriés. En cas de doute sur la compatibilité entre le transformateur, la fiche et le courant du pays d'utilisation, **NE PAS TENTER D'UTILISER L'APPAREIL**. Voir la section 5 de ce manuel ou contacter le revendeur ou l'usine.
- Arrêter immédiatement le fonctionnement si un liquide ou un solide venait à s'infiltrer à l'intérieur de l'armoire. Débrancher l'appareil et le faire vérifier par un personnel qualifié.
- Débrancher le transformateur de la prise murale si l'on prévoit de ne pas utiliser l'appareil pendant un certain temps. Pour débrancher le cordon d'alimentation, tirer sur la prise. Ne jamais tirer sur le cordon.
- L'appareil sera connecté à la source d'alimentation principale aussi longtemps que le transformateur de tension restera branché sur la prise murale, même si l'appareil lui-même a été mis hors tension.
- Ne pas démonter l'appareil. Confier l'entretien de l'appareil uniquement à un personnel qualifié

Precauciones de seguridad

Antes de operar la unidad, haga el favor de leer detenidamente las siguientes precauciones de seguridad.

Advertencias

¡PRECAUCION!

PARA EVITAR PELIGROS DE INCENDIO O CHOQUE ELECTRICO, NO EXPONGA LA UNIDAD A LA LLUVIA NI A LA HUMEDAD. PARA REDUCIR EL RIESGO DE CHOQUE ELECTRICO, NOQuite los paneles laterales ni de fondo. El interior no tiene piezas reparables por el usuario. Para servicio de reparacion y mantenimiento, solicite la atencion de un tecnico de servicio autorizado.

- Opere la unidad sólo a 120 VCA, 50 ó 60 Hz. Para las impresoras enviadas fuera de los Estados Unidos y Canadá, se suministran el transformador de voltaje (100 VAC o 220/250 VAC) y enchufe apropiados junto con la unidad. Si no está seguro que el transformador y enchufe correspondan al voltaje de corriente de su país, **NO INTENTE USAR LA UNIDAD**. Refiérase a la Sección 5 de este manual o contáctese con su distribuidor o la fábrica.
- Detenga la operación inmediatamente si algún líquido u objeto sólido cayera en el armario. Desenchufe la unidad y hágala revisar por un técnico de servicio autorizado.
- Desenchufe el transformador del tomacorriente si no va a usar la unidad por un período de tiempo prolongado. Desenchufe el cordón jalando del enchufe. Nunca jale del cordón mismo.
- La unidad no estará desconectada de la fuente de alimentación principal mientras el transformador esté enchufado en el tomacorriente, incluso si la unidad hubiese sido apagada.
- No desarme el armario. Para servicio de mantenimiento, solicite la atención de un técnico autorizado.

Avvertenze

ATTENZIONE!

ONDE EVITARE IL PERICOLO DI INCENDIO O SCOSSA ELETTRICA, NON ESPORRE L'UNITÀ ALLA PIOGGIA OD UMIDITÀ. PER RIDURRE IL RISCHIO DI SCOSSA ELETTRICA EVITARE DI RIMUOVERE I PANNELLI LATERALE O POSTERIORE. LA FUNZIONALITÀ DELLE PARTI ALL'INTERNO DELLA UNITÀ NON È DI COMPETENZA DELL'UTENTE. PER LA RIPARAZIONE CONTATTARE IL PERSONALE DI ASSISTENZA QUALIFICATO.

Precauzioni per la sicurezza

Prima di dare inizio al funzionamento della unità, siete pregati di leggere attentamente le seguenti precauzioni di sicurezza.

- L'unità funziona soltanto con alimentazione a 120 VAC, 50 o 60 Hz. Le stampanti con destinazione diversa degli Stati Uniti e Canada sono di norma fornite con trasformatore per la tensione adatta (100 VAC o 220/250 Vac) e relativa spina. Qualora non abbiate la certezza che il trasformatore e la spina di cui disponete siano quelli adeguati alla alimentazione erogata nel vostro paese, **NON PROVATEVI AD USARE L'UNITÀ**. Consultare il manuale alla Sezione n° 5, oppure rivolgersi al rivenditore o alla fabbrica.
- Arrestare immediatamente il funzionamento dell'unità qualora si verifichi un versamento di liquido o la caduta di un oggetto solido all'interno del suo alloggiamento.
- Staccare la spina del trasformatore dell'unità dalla presa a muro qualora non ne prevediate l'utilizzo per un protratto periodo di tempo. Disconnettere il cordone elettrico afferrandone la spina, evitando sempre di tirare il cordone stesso.
- L'alimentazione alla unità non è interrotta se la spina del trasformatore di tensione rimane collegata alla presa a muro, anche quando l'unità è stessa risulta spenta.
- Non smontare la struttura dell'alloggiamento. Le riparazioni sono competenza soltanto di personale qualificato.

Precauções de segurança

Antes de operar esta unidade leia cuidadosamente as seguintes precauções de segurança.

Advertência

CUIDADO!

PARA EVITAR PERIGO DE CHOQUES ELÉTRICOS OU INCÊNDIO, NÃO EXPONHA A UNIDADE À CHUVA OU UMIDADE. PARA REDUZIR O RISCO DE CHOQUES ELÉTRICOS, NÃO REMOVA OS PAINÉIS LATERAIS OU TRASEIRO. NÃO HÁ NENHUMA PARTE DENTRO QUE POSSA SER CONSERTADA PELO USUÁRIO. PEÇA ASSISTÊNCIA AO PESSOAL QUALIFICADO.

- Opere esta unidade somente em 120 VAC, 50 ou 60 Hz. O plugue e o transformador de voltagem (100 VAC ou 220/250 VAC) apropriados devem ser fornecidos com as impressoras que foram enviadas para fora dos Estados Unidos e Canadá. Em caso de dúvida sobre se o plugue e o transformador de força são apropriados ao sistema elétrico do seu país, NÃO TENHA USAR ESTA UNIDADE. Consulte a seção 5 deste manual ou entre em contato com seu revendedor ou a fábrica.
- Pare imediatamente a operação se qualquer líquido ou objeto sólido cair em seu gabinete. Desligue a unidade e mande examiná-la por pessoal qualificado.
- Desligue o transformador de força da unidade conectado à tomada de corrente elétrica da parede se você não usar a unidade por um longo período de tempo. Desconecte o fio segurando o plugue. Nunca puxe o próprio fio.
- A unidade não está desconectada da fonte de força principal enquanto o transformador de força estiver ligado à tomada da parede, mesmo que a própria unidade esteja desligada.
- Não desmonte o gabinete. Peça assistência somente ao pessoal qualificado.

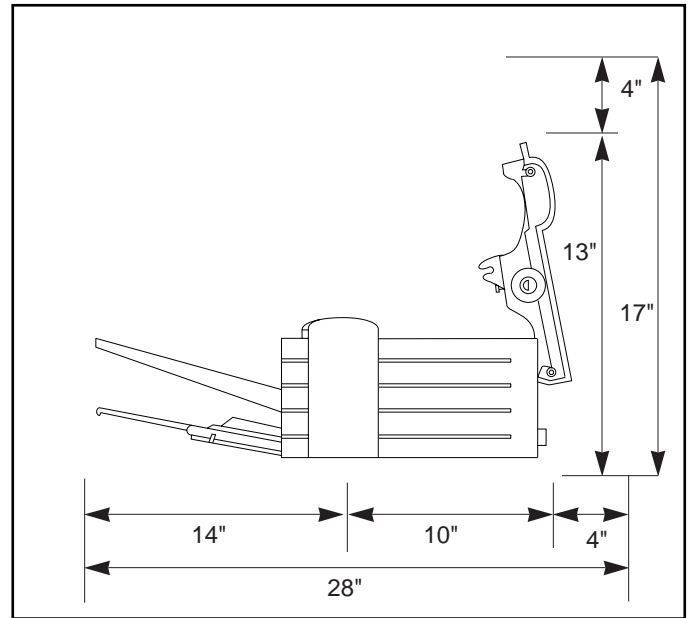
3

Getting Started

A. Choosing a Good Location

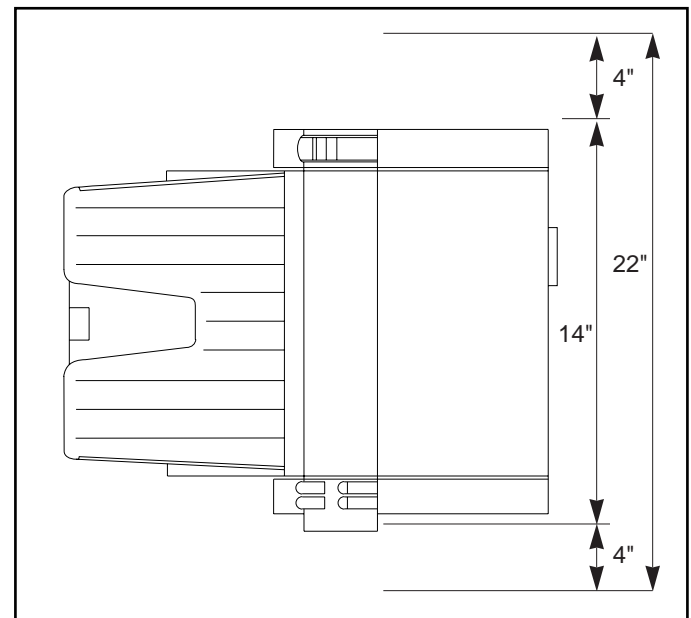
Place the unit in a location with adequate air circulation to prevent internal heat build up.

1. Use the dimensions specified in these two drawings as a guideline for the minimum clearances to the unit.



2. Do not place the unit in a location where the ventilation holes located on the rear of the unit could become blocked.

3. Do not install unit (a) near heat sources such as radiators or air ducts, or (b) in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.



B. About Moisture Condensation

If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense inside the unit. Should this occur, print quality may not be optimum. Leave the unit turned off in a warm, dry room for several hours before using. This will allow the moisture to evaporate.

C. Unpacking and Inspection

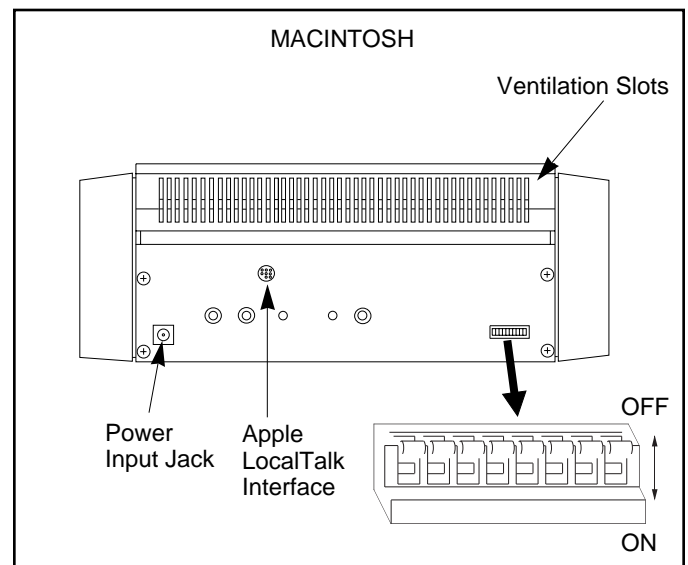
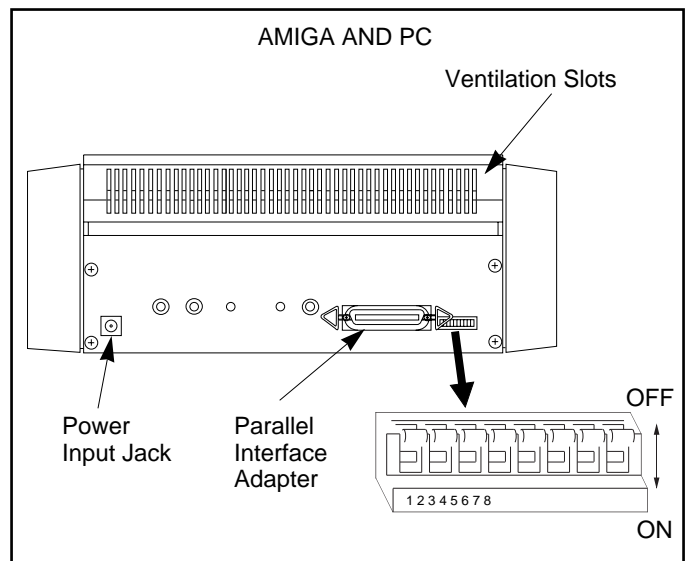
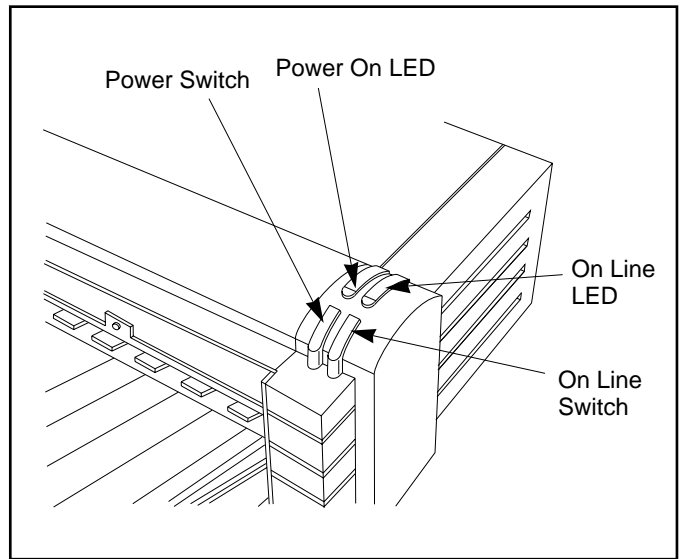
While unpacking your printer, inspect the carton to ensure that no damage has occurred during shipping. Make sure that all supplied accessories are included with your unit. The following items should be included with your PrimeraPro Color Printer:

- Printer
- Power Transformer
- Sample Media Kit
- Wax Thermal Starter Ribbon (30 Prints)
- Dye-Sublimation Starter Kit (10 Prints)
- Paper Output Tray
- Ribbon Cartridges (2)
- Printer Driver Diskette (3.5"). Contact FARGO Technical Support for an optional 5.25" driver diskette.
- Warranty Statement and Registration Card
- This manual and other printed information

Save the carton and packing materials. They will come in handy when transporting the unit or shipping it for service.

D. Identifying the Parts

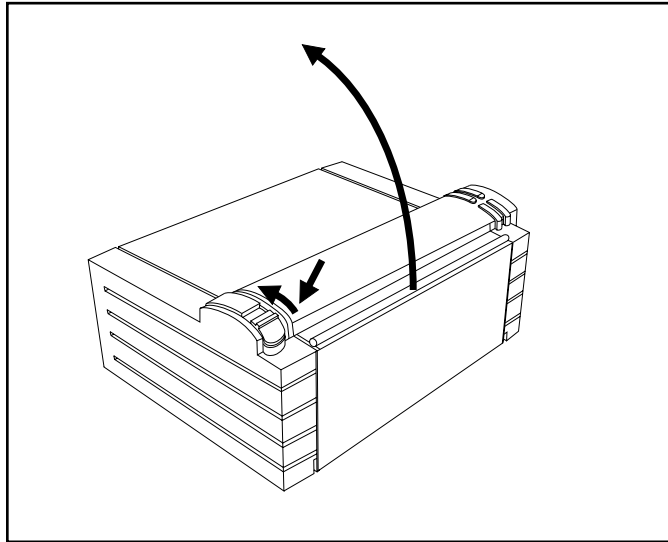
These illustrations show the controls, switches and indicator lights, and input jacks found on your PrimeraPro. For complete instructions about each control or feature, see later sections of this manual.



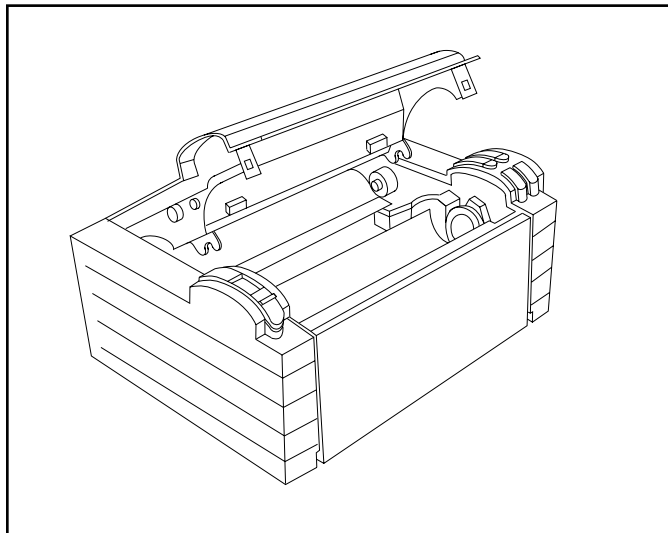
E. Removing the Ribbon Cartridge

The printer's Ribbon Cartridge is located inside the unit during shipment. Remove the cartridge from the printer using the following procedure:

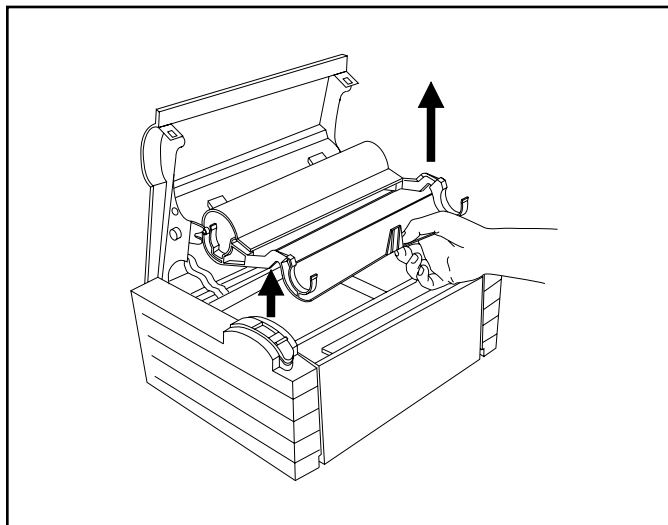
1. Press the Cover Release Lever. Allow the cover to swing up and open.



2. With the cover open, you can see the Ribbon Cartridge.

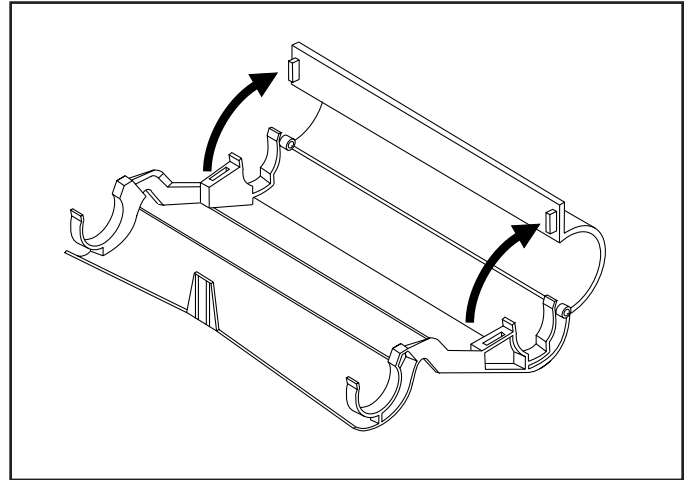


3. Remove the shipping tape from both sides of the cartridge. Grasping the tab on the front of the cartridge, carefully remove it from the printer.



4. Flip open the Ribbon Cartridge Cover.

You are now ready to go on to Section Four to learn about paper, ribbons, transparencies and how to load the various media.



NOTE

Your PrimeraPro ships with two separate ribbon cartridges; one for wax thermal transfer ribbons and one for dye-sublimation ribbons. Each of these specific ribbon cartridges should be used only with the appropriate ribbon type. Do not use these cartridges interchangeably.

A. About Ribbons

Your PrimeraPro initially comes equipped with both a 30 print 3-color wax thermal transfer Starter Ribbon and a 10 print dye-sublimation Starter Kit. Normally, wax thermal 3-color ribbons have 115 prints. With a 3-color ribbon, all three colors (C,M,Y) are used to print a “process” or “additive” black. For color printing with a “true” black, you may wish to use a 4-color wax thermal ribbon (C,M,Y,K). The 4-color ribbon has a separate black panel for printing “true” black, and will produce 80 prints.

A wax thermal monochrome ribbon is also available for users who wish to use PrimeraPro for printing laser quality text and monochrome images in 64-level gray scale. The monochrome ribbon will produce 360 prints. If you plan to do a lot of switching back and forth between color printing and monochrome printing, you should consider ordering a spare Ribbon Cartridge for your monochrome ribbon. This allows you to quickly and easily change ribbon types. (See Appendix A for important information on monochrome printing.)

For dye-sublimation printing, a special 3-color or 4-color dye-sublimation ribbon is available for printing photo-realistic images in spectacular 24-bit color. The dye-sublimation Starter Kit provides a 3-color ribbon and special A (Letter) or A4-size dye-sublimation paper for 10 prints. Normally, the 3-color dye-sublimation ribbon is available in either a 25 or 100 print Photo-Realistic Refill Kit which also includes matching quantities of FARGO’s dye-sublimation paper.

Similar to PrimeraPro’s 4-color wax ribbon, the 4-color dye-sublimation ribbon offers you full color printing with a “true” black. The 4-color dye-sublimation ribbon is available in a 50 print Photo-Realistic Refill Kit which also includes 50 sheets of FARGO’s Legal-size (8.5” x 14”, 216 x 356mm) dye-sublimation paper. These large format dye-sublimation supplies not only offer you the enhanced quality of true 4-color dye-sublimation printing, but also offer a larger printable area.

A dye-sublimation monochrome ribbon is also available along with A (Letter) or A4-size dye-sublimation paper in a 100 print refill kit for monochrome printing in 256-level gray scale.

For small format dye-sublimation printing, FARGO offers the A6 Accessories Kit for printing full-color, 4” x 5” (102 x 127mm) dye-sublimation output. This kit provides a 100 print, 3-color dye-

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Ribbons and Paper

sublimation ribbon and 100 sheets of dye sublimation paper, both in the unique A6-size format. The A6 kit is perfect for printing snapshot-size photos or illustrations.

Contact your local dealer of FARGO for current ribbon and refill kit selection and pricing.

Only the dye-sublimation ribbon (distinguished by its plastic cores) together with the dye-sublimation paper (distinguished by its white, glossy finish) will produce dye-sublimation output. Do not use wax thermal supplies for dye-sublimation printing.

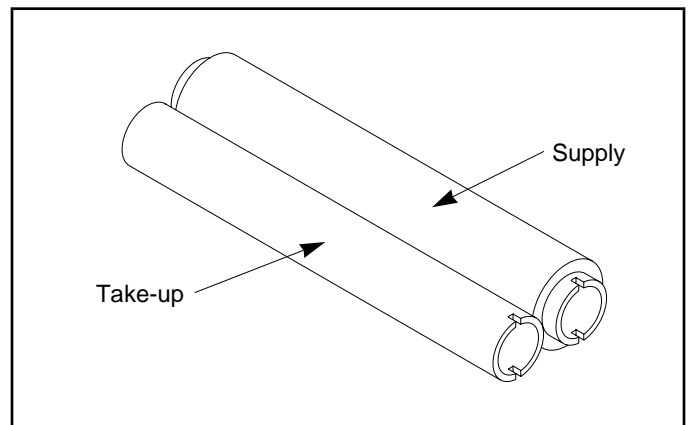
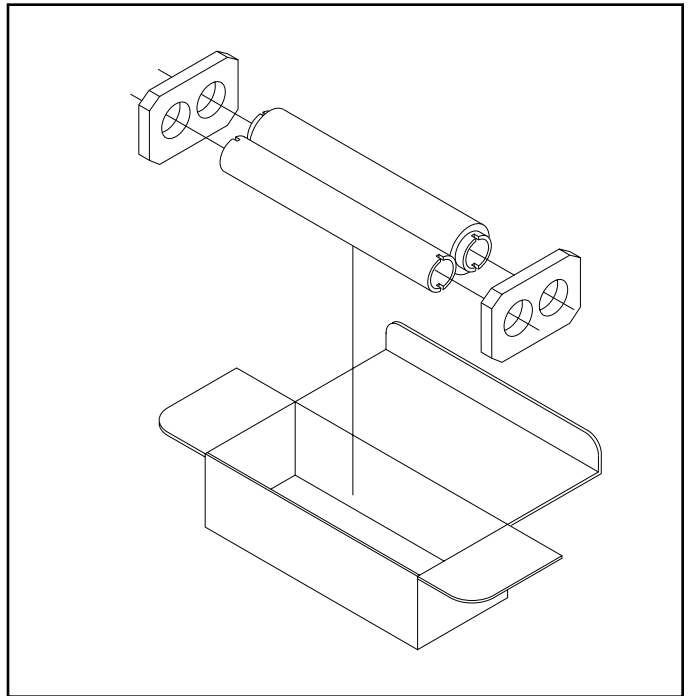
NOTE

B. Loading Ribbon into the Ribbon Cartridge

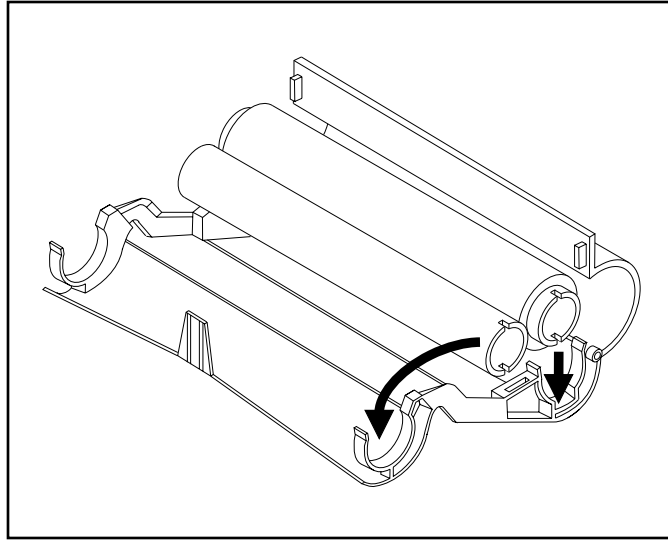
Follow these steps to load ribbon into the Ribbon Cartridge:

1. Remove the ribbon from its box. For wax thermal ribbons, remove the end caps which were used for shipping protection. For dye-sublimation ribbons, simply remove the ribbon from its plastic wrap. The dye-sublimation ribbon should only be handled by the ends of the ribbon core. Do not touch the colored portion of the dye-sublimation ribbon. Oil or dirt from your hands can impair print quality.

2. The supply end of the ribbon is the side with ribbon on it. The ribbon take-up is the other end.



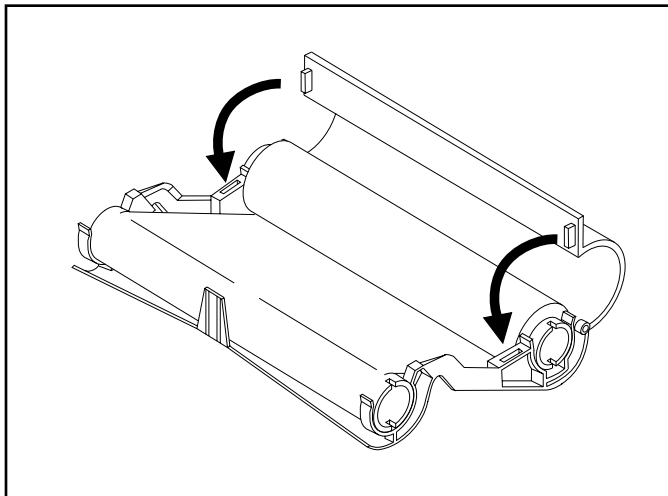
3. Place the supply end of the ribbon into the supply end of the Ribbon Cartridge (the side with the cartridge cover). Make certain that the ribbon is fed from *underneath* the supply end of the ribbon roll, *up and over* the top of the take-up end of the ribbon roll.



IMPORTANT!

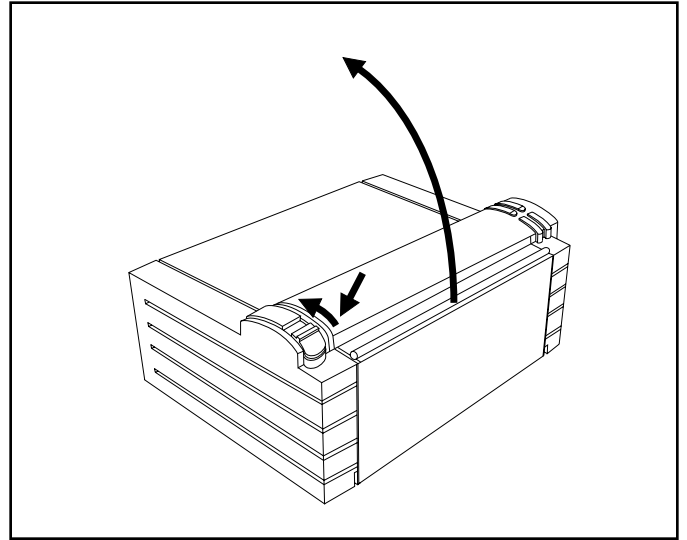
DO NOT REVERSE THE RIBBON. DAMAGE MAY OCCUR TO THE THERMAL PRINT HEAD!

4. After the ribbon has been installed into the Ribbon Cartridge, close the Ribbon Cartridge Cover. You are now ready to place it back into the printer.

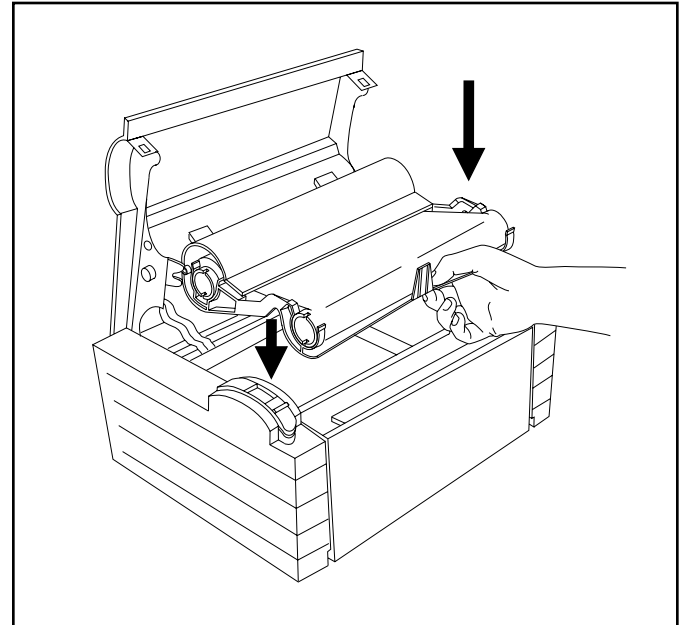


C. Placing the Ribbon Cartridge into the Printer

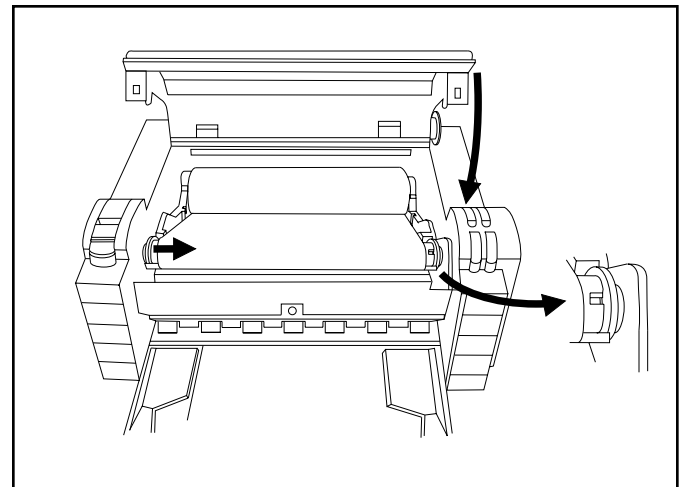
1. Press the Cover Release Lever. Allow the cover to swing up and open.



2. With the cover open, place the Ribbon Cartridge into the printer. Be certain that the supply end of the Ribbon Cartridge is towards the rear of the printer.



3. Close the cover. When you start to print, the notches on the Ribbon Drive Hub and the Take-Up Roll will automatically engage.



D. About Paper and Transparency Film

PrimeraPro comes equipped with both a wax thermal transfer and a dye-sublimation sample media kit. The wax thermal transfer kit contains 25 sheets of standard grade paper and 5 sheets of transparency film. The Dye-Sublimation Starter Kit contains 10 sheets of dye-sublimation paper. This should be enough to get you started. The amount of media contained in each kit matches the number of prints on each Starter Ribbon.

When you need more thermal transfer paper, it is highly recommended that you use FARGO-brand paper. Although PrimeraPro prints wax thermal transfer on plain paper, papers with a very smooth finish or a coated finish give you the best possible print quality and color brightness. Two grades of thermal transfer paper are available from FARGO: Standard Grade and Premium Grade. Standard Grade is a very smooth uncoated paper (Print on either side). Premium Grade is a coated sheet (Print on the smooth, coated side). Both are available in A-Size (8.5" x 11") and A4-Size (210 x 297mm). You may also wish to experiment with very high-quality laser printer papers. Depending upon the paper selected, quality may range from very poor to excellent.

FARGO's dye-sublimation paper is only available pre-packaged with the dye-sublimation ribbon. Dye-sublimation paper is available in A (8.5" x 11") or A4-size (210 x 297mm) when packaged with the 3-color or monochrome dye-sublimation ribbons. A Legal-size (8.5" x 14", 216 x 356mm) dye-sublimation paper is also available for use only with FARGO's 4-color dye-sublimation ribbon. This large format ribbon/paper combination provides true 4-color dye-sublimation printing along with a larger printable area than the standard A or A4-size paper. It is very important to always use FARGO-brand dye-sublimation ribbon and paper, since both are specifically matched for use with your PrimeraPro (Print on white, glossy side).

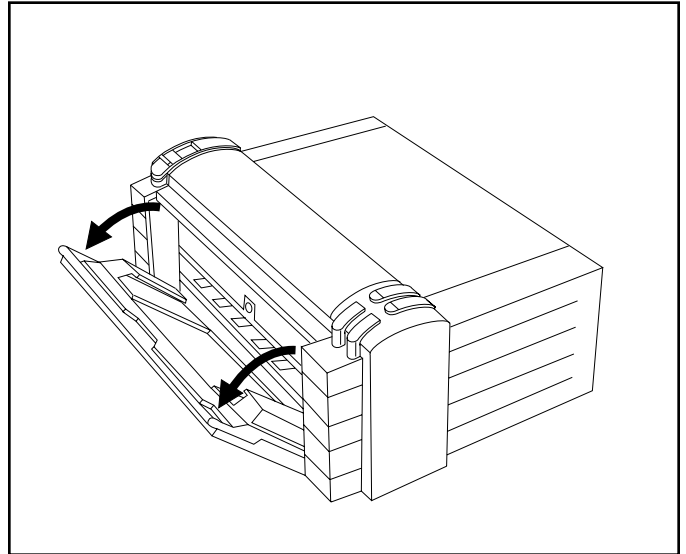
Like FARGO-brand papers, FARGO Transparencies are specially coated for either wax thermal transfer or dye-sublimation printing. Dye-sublimation transparencies are available in A (Letter) or A4-sizes and come pre-packaged with a 3-color dye-sublimation ribbon. Wax thermal transparencies are available in A-long (Letter-long) or A4-long sizes. All FARGO transparencies have an anti-static coating on their non-print side which helps to minimize feeding problems.

Please contact your local dealer or FARGO for current ribbon, paper, and transparency film selection and pricing.

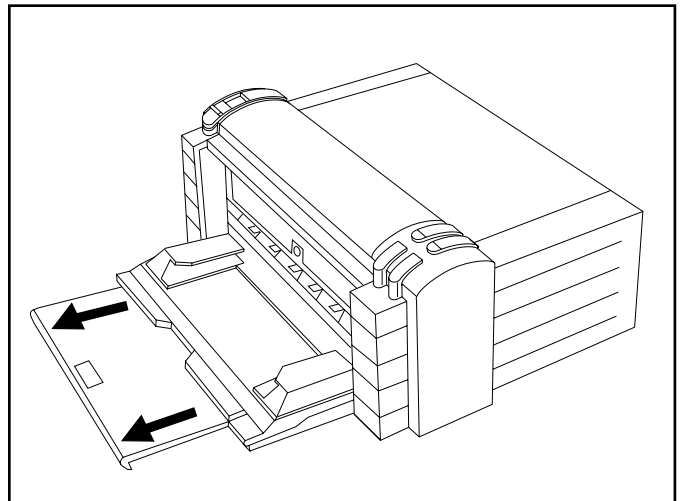
E. Installing and Adjusting Paper Trays

PrimeraPro has two paper trays. The bottom tray (Paper Supply Tray) is for storing paper before printing. The removable top tray (Paper Output Tray) catches paper after printing.

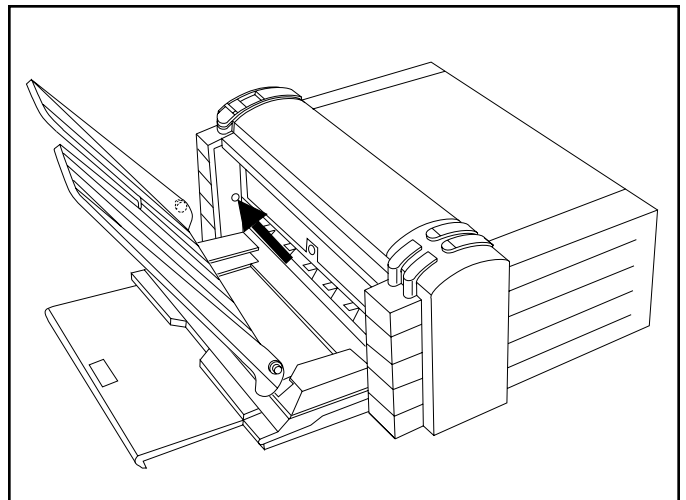
1. Gently pull the Paper Supply Tray Door open and lower it until it is almost level.



2. Pull out the Paper Supply Tray until it is fully extended.

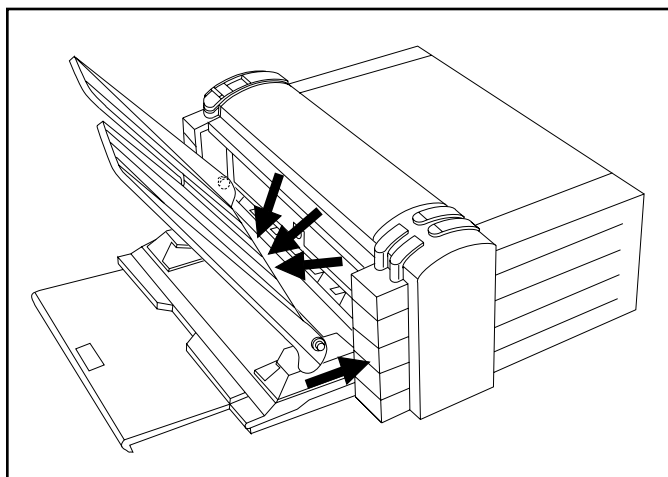


3. Locate the Paper Output Tray. Two mounting posts are on the front side edges of the tray. Place one post into the mounting hole located on either side of the front interior of the printer.



4. Slightly bend the Paper Output Tray just enough to place the remaining mounting post into the other mounting hole. Lower the tray into place.

While care should be taken not to bend the tray too much, don't worry; the tray is not easily broken.



F. Loading Paper or Transparency Film

PrimeraPro readily accepts five different sizes of print media: A-size (Letter), A4-size, A-long (Letter-long), A4-long, and Legal-size. The A-long, A4-long, and Legal-size print media are simply extended-length sheets which allow for a larger printable area. FARGO wax thermal transparency film and T-shirt transfer paper are only available in the A-long or A4-long sizes. Only the dye-sublimation paper shipped with the 4-color dye-sublimation ribbon is available in the Legal-size paper.

Your PrimeraPro has an internal mechanical adjustment that is factory-set for either A-size or A4-size paper. *If you need to change an A-size unit (all 110/120 VAC units) to an A4-size unit (all 220/250 VAC units) or vice versa, refer to the following instructions: Please note that all 220/250 VAC units must be internally set to the A-size in order to print onto the Legal-size dye-sublimation paper.*

1. Open the top cover and remove the ribbon cartridge.
2. With the Paper Input Tray down, and the Paper Output Tray (the clear plastic tray) removed, unscrew and remove the only visible screw on the Front Frame Plate of the printer.
3. Gently slide the entire bronze-colored Output Assembly, located just above the Paper Input Tray, out about five centimeters (steps 1–3 are illustrated up to this point on page 70 of this manual).
4. Looking inside the printer, the Paper Feed Roller and the two black brackets which attach it to the printer should now be visible.
5. To adjust from A to A4-size print media, gently slide the left bracket to the right approximately .25". To adjust from A4 to A-size print media, do just the opposite. The internal A/ A4 adjustment is now complete. Reverse these steps to reassemble.

To adjust between A and A4 widths, you must also move the Paper Guide on the Paper Input Tray to the left or right for A and A4 size sheets.

To adjust between regular and long lengths of paper, you must make an adjustment in the printer driver setup (see Section 6, 7, or 9 for instructions on using your specific printer driver). Keep in mind the following information when selecting your paper size.

IMPORTANT NOTE

A-size (Letter) and A4-size paper have a non-printable area on the top of the sheet (or the right side of the sheet when printing in landscape mode) of 0.5" (12.7mm) and on the bottom of the sheet of approximately 1.20" (30.5mm). Remember this when sizing images in software application programs and when selecting media. If a full page of printing is desired, use A-long, A4-long, or Legal-size paper or transparency film with perfs.

Additional notes on paper size: PrimeraPro always “sizes” the paper automatically during the first part of the print cycle. This happens when the printer initially draws the paper in, pauses, and then feeds the sheet back out to print the first panel. Paper must fall within the tolerances noted in Table 4-1 below in order to be sized correctly by the printer. Otherwise, the sheet is ejected and the On Line light will blink rapidly to indicate an error.

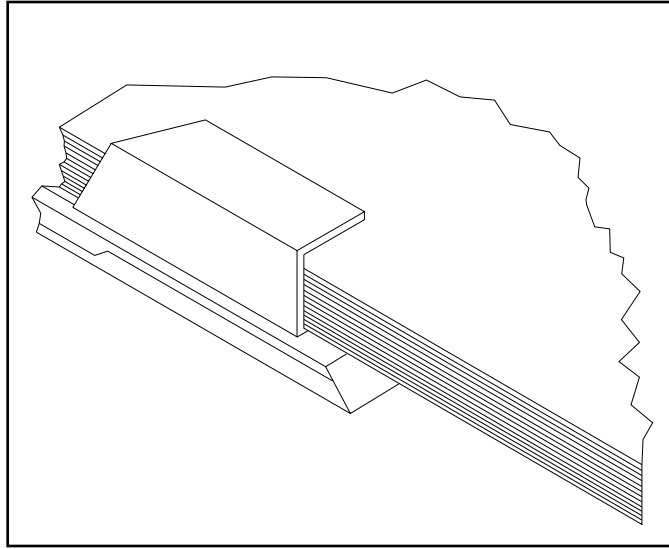
Table 4.1 lists the maximum printable areas for the five different accepted paper lengths and the various types of media available for each page size. Make sure that the image you’re sending to the printer falls within these printable areas. Otherwise, information at the bottom of the page could be missing!

Paper Size	Page Length	Color Print Area	Monochrome Print Area	Media Types Available
A (Letter)	8.5" x 11"	8.5" x 9.3"	8.5" x 9.8"	Premium and Standard wax thermal transfer paper, dye-sublimation paper and transparency film
A4	210 x 297mm	210 x 254mm (8.3" x 10")	210 x 266mm (8.3" x 10.5")	Premium and Standard wax thermal transfer paper, dye-sublimation paper and transparency film
A-Long (Letter-long)	8.5" x 13" (14" max.)	8.5" x 11"	8.5" x 11"	Premium wax thermal paper, wax thermal transparency film, T-shirt transfer paper
A4-Long	210 x 348mm (355mm max.)	210 x 297mm (8.3" x 11.7")	210 x 297mm (8.3" x 11.7")	Premium wax thermal paper, wax thermal transparency film, T-shirt transfer paper
Legal	8.5" x 14" (216 x 356mm)	8.5" x 11.3" (216 x 287mm)	8.5" x 12.3" (216 x 312mm)	Dye-sublimation paper for 4-color Photo-Realistic Refill Kit

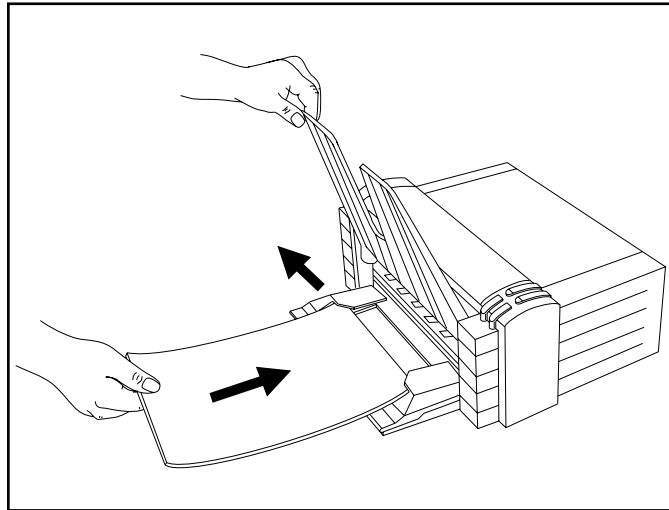
TABLE 4-1: Paper Size Tolerances, Image Sizes, Available Media

Follow these steps to load paper or transparency film:

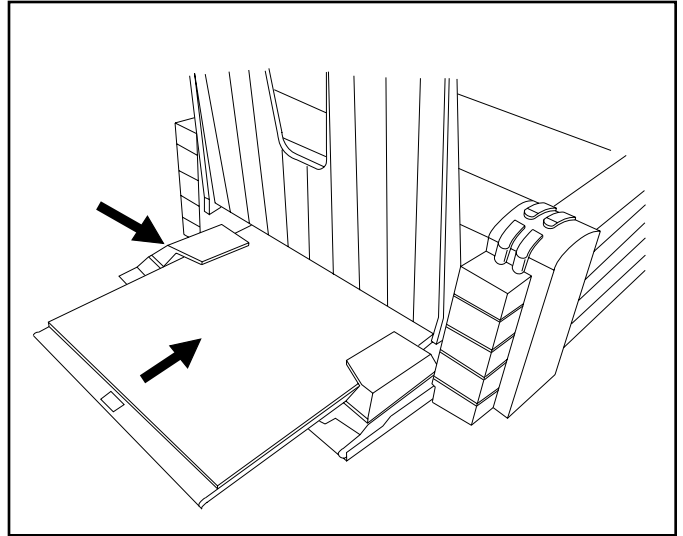
1. A maximum of 50 sheets of thermal transfer paper, 25 sheets of dye-sublimation paper, or 30 sheets of transparency film (“print media”) can be loaded at a time. Do not attempt to load more than these amounts. For easiest paper loading, always load at least 10 sheets of paper or transparency film.



2. Before you install print media, be sure it is free of bent edges and that it is neatly stacked. Handle the dye-sublimation paper only along the edges. Do not touch the printable side (the white glossy side) of the dye-sublimation paper. Oil or dirt from your hands can impair print quality.



3. Insert the print media — **PRINT SIDE FACING DOWN!**— between the paper guides. Move the Adjustable Paper Guide to match the paper size. A and A4-size markings are indicated on the left side of the Paper Input Tray.



IMPORTANT NOTES

- 1. You must firmly push the stack of print media into the printer.** A small amount of extra pressure is required to push the paper underneath the internal feed roller. **If inserting a stack of standard A-size (8.5" x 11") paper, for example, the paper should be pushed into the printer until the head of the arrow on the fully-extended Paper Input tray is visible.** Once the paper has been inserted, slide the adjustable paper guide over until it is flush with the edge of the paper stack. This will ensure consistent paper feeding.
- 2. Transparency film sheets, even those with anti-static back coatings, generate static electricity.** Although this static build-up won't harm your printer, it can cause feeding problems. For best performance and reliability, remove printed transparencies from the Paper Output Tray after each has finished printing.

5

Powering Up the Printer

A. Applying Power

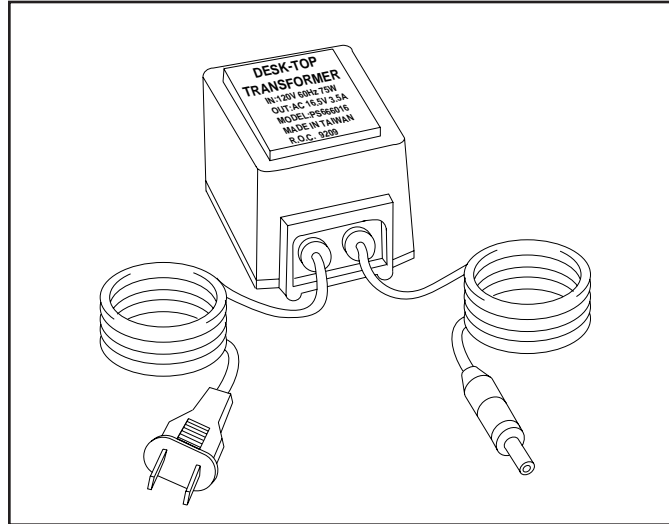
1. A power transformer supplied with the printer should be properly configured for the power used in your country. Remove the transformer from its box and double-check that it is correct.



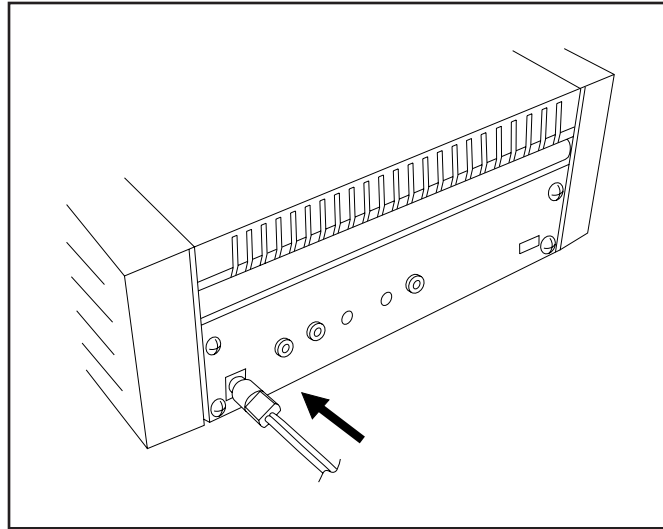
CAUTION!

The PrimeraPro Transformer is designed for desktop use only.

*If you have any doubts about the plug configuration or the voltage, **DO NOT ATTEMPT TO USE THE PRINTER.** Contact your dealer or FARGO for information on the correct transformer. Use your printer only if you are certain that the plug and power rating are correct.*



2. Place the DC power plug end of the transformer cord into the jack on the rear panel of the printer.



NOTE

Optional external Transformer must be a Listed device with an output rating of 16.5 volts and 4.5 amps AC (alternating current) and fused at 7 amps or energy limited to 240 VA.

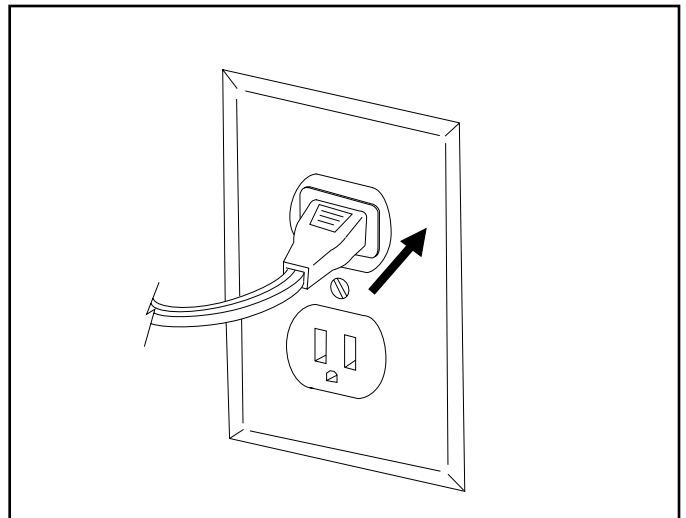
FARGO supplied
120 VAC transformer:

Certified for use with PrimeraPro: Transformer
Model 760416
Certifier pour utiliser avec PrimeraPro: Un
Transformateur Modèle 760416

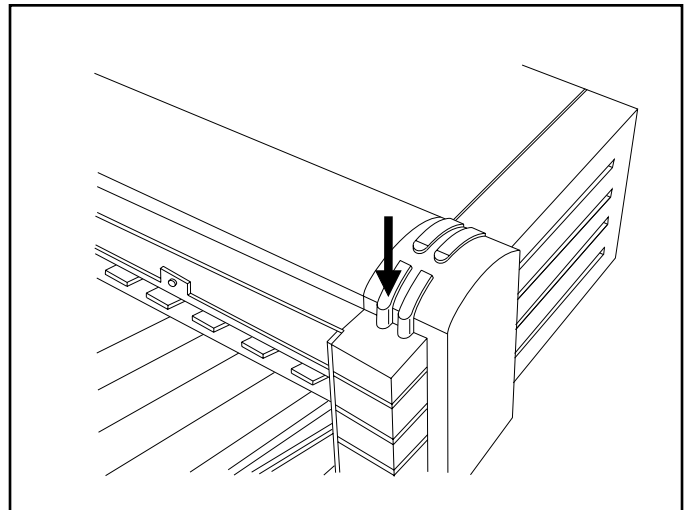
FARGO supplied 220-
250 VAC transformer:

TÜV licensed for use with PrimeraPro: Transformer
Model 760417
TÜV zertifiziert für PrimeraPro: Transformator
Produkt Nummer 760417

3. Place the AC power plug end of the transformer into an available wall outlet. The wall outlet should be located near the printer and should be easily accessible.



4. Power is automatically applied to the printer when it is plugged in. Press the Power switch if you wish to turn the power off.



B. Running the Self Test

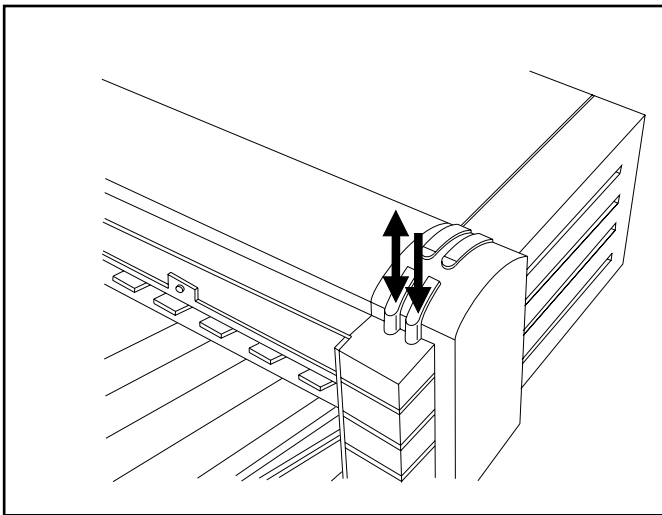
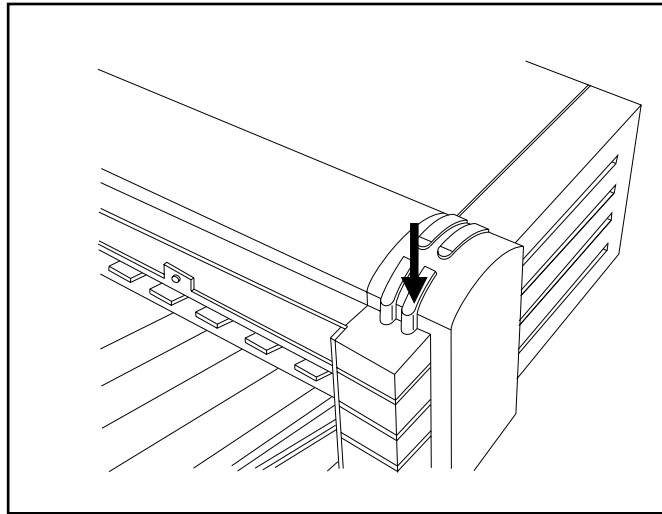
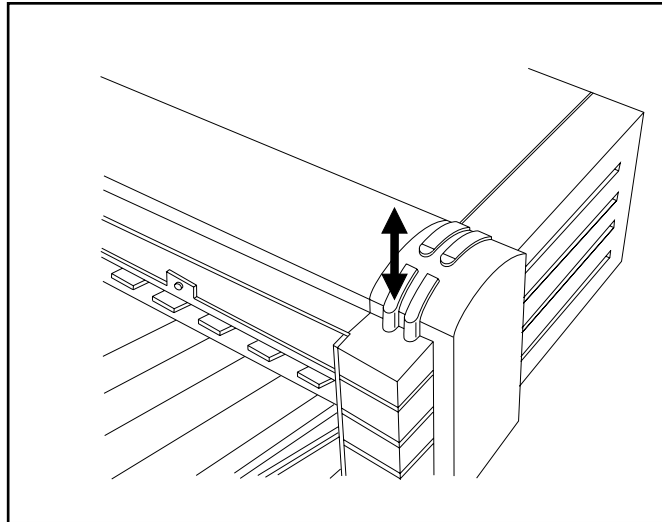
A self test can now be performed to check for proper operation of the printer. **The self test should be conducted only with the wax thermal transfer supplies installed in your printer.**

PrimeraPro does not have a self test feature available for use with the dye-sublimation supplies. A sample of the wax thermal transfer Self Test print out is on the next page.

1. If power is on, turn it off now. The Power light should be off. Verify that a ribbon is installed and print media is loaded.

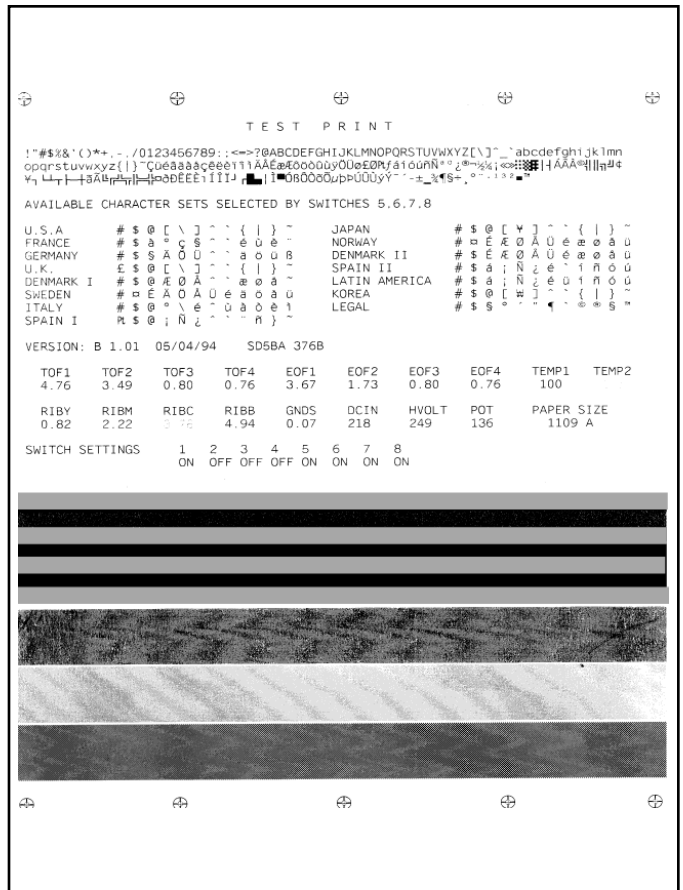
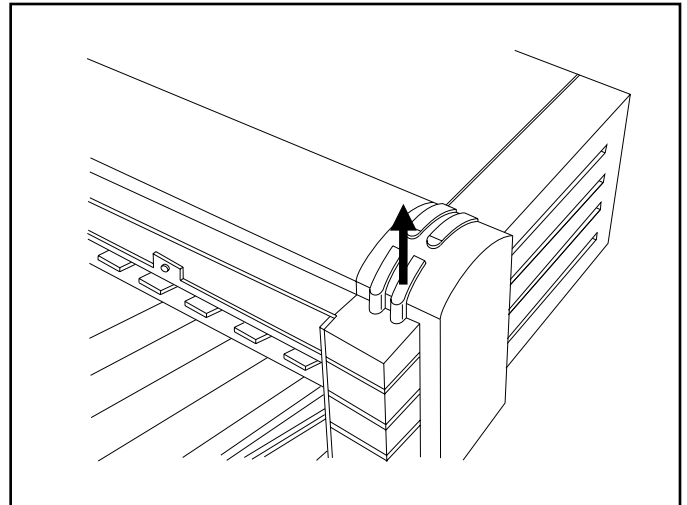
2. Press and hold the On Line switch.

3. While holding the On Line switch down, press the Power switch.



4. Release the Power switch followed by the On Line switch. The self test pattern should now be printing.

Color Self Test Example:
(Approximately 35% of actual size)

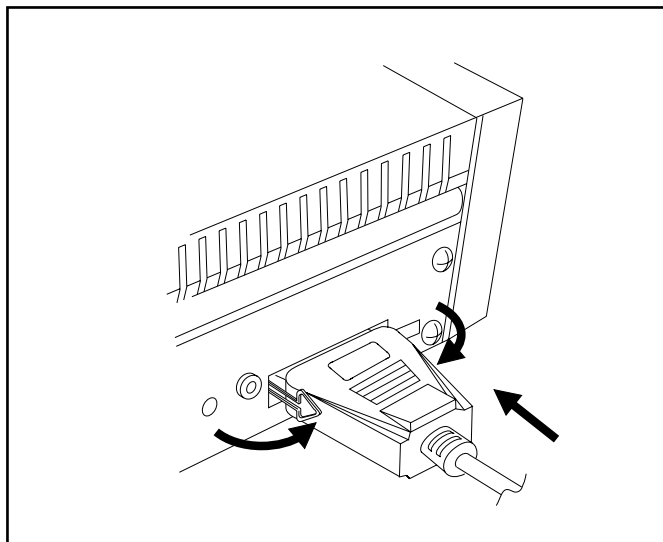


A. Connecting PrimeraPro to Your PC

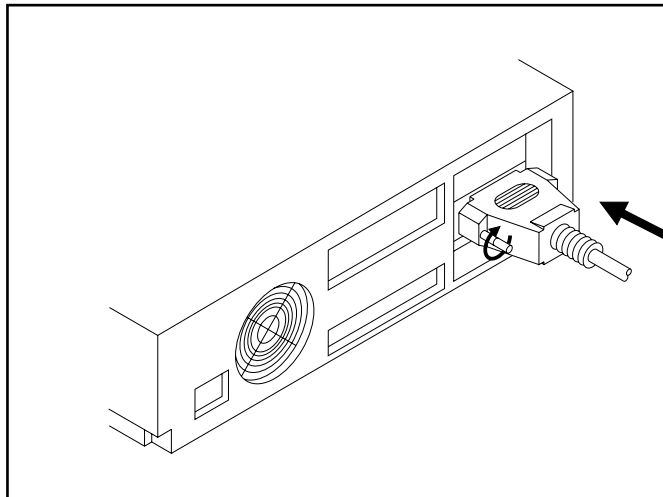
PrimeraPro is designed to be used with nearly any IBM-PC or compatible running Windows 3.1 (or higher). For best performance, drive PrimeraPro with a 486 computer with 8 meg of RAM or higher.

PrimeraPro uses a standard Centronics parallel port, commonly referred to as LPT1 or LPT2 on most PC's. If you already have another printer attached to this port and don't have a second parallel port available, you may wish to add another parallel port. This makes it easy to print color alongside your existing printer. Obtain the correct cable (not included) from your dealer or FARGO and connect PrimeraPro to your PC as follows:

1. Connect the Centronics-type parallel side to the PrimeraPro. Snap the fastening clips into place.



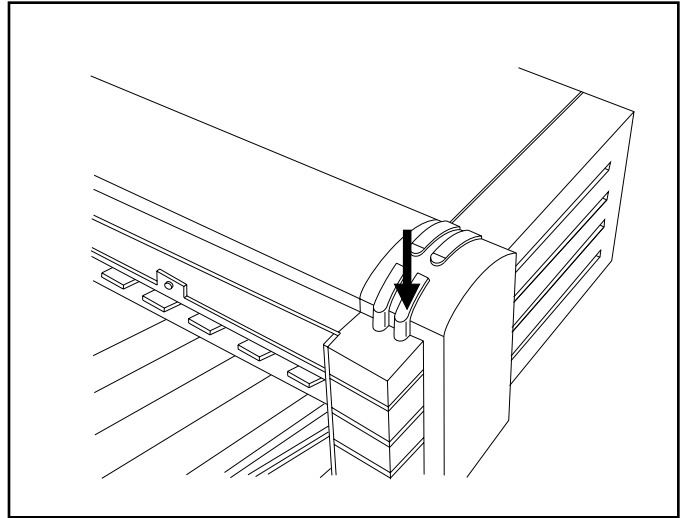
2. Connect the other side to the back of your PC at the LPT1, LPT2, or PARALLEL connector. Tighten the cable's thumbscrews (if your cable has regular slotted screws, tighten them with a small screwdriver).



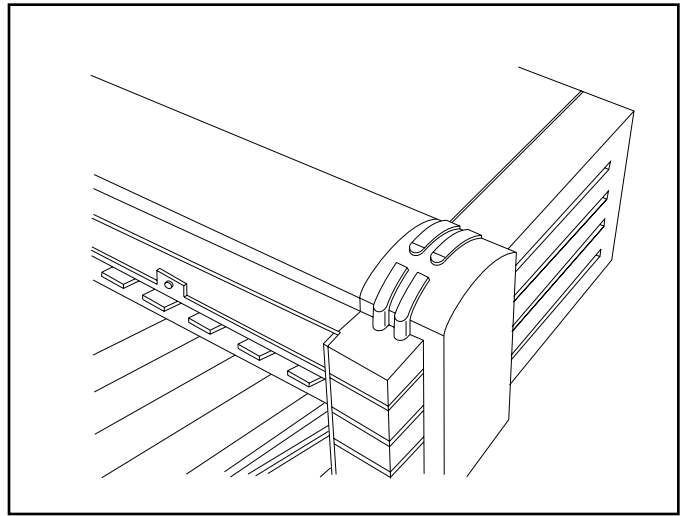
6

Using
PrimeraPro
With an
IBM-PC or
Compatible

3. PrimeraPro must have its On Line light illuminated to receive data. If the light is not on, press the On Line switch.



4. If the On Line light is flashing, check for a paper mis-feed or jam. Press the On Line switch to resume operation.



B. Installing the Windows 3.1 Printer Driver

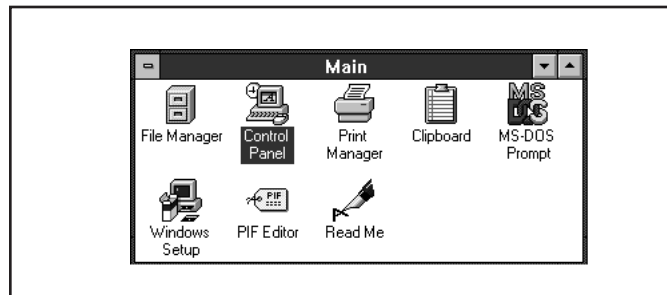
PrimeraPro can be used with virtually any Microsoft Windows 3.1 (or higher) software application program. If your application program allows printing, it will more than likely be compatible with PrimeraPro. Before printing, you must tell the application that you're using a PrimeraPro. This is accomplished the first time you use the printer by installing in Windows what is called a "printer driver." The printer driver is simply a diskette with software on it that gives PrimeraPro the proper commands it needs in order to print. After you've installed the driver, put the driver diskette away in a safe place for possible future use. *It is very important to save the original printer driver diskette which ships with your printer. This printer driver diskette includes special print information which is unique to your specific printer and which may be called for when updating printer drivers.*

NOTE

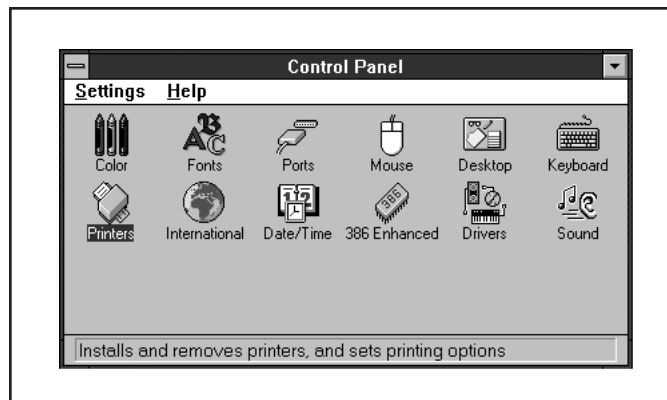
This section of the PrimeraPro Operator's Manual assumes that you are already familiar with Windows and know how to move around within Program Groups, how to use a mouse, and so on. If you are not yet familiar with Windows, consult the appropriate Microsoft documentation to become familiar with the basics of Windows before proceeding.

Use the following procedure to install PrimeraPro's Windows printer driver:

1. After starting Windows, go to the **Main** program group and select Control Panel.



2. From the Control Panel, select Printers.



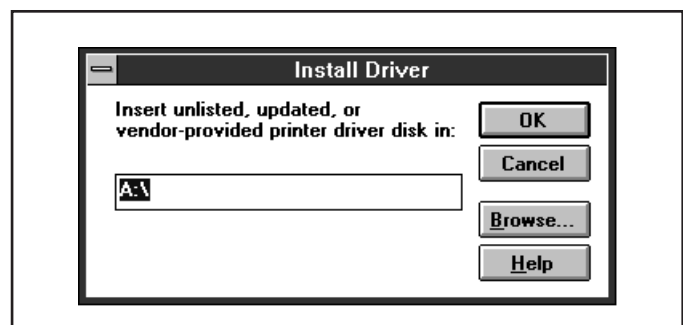
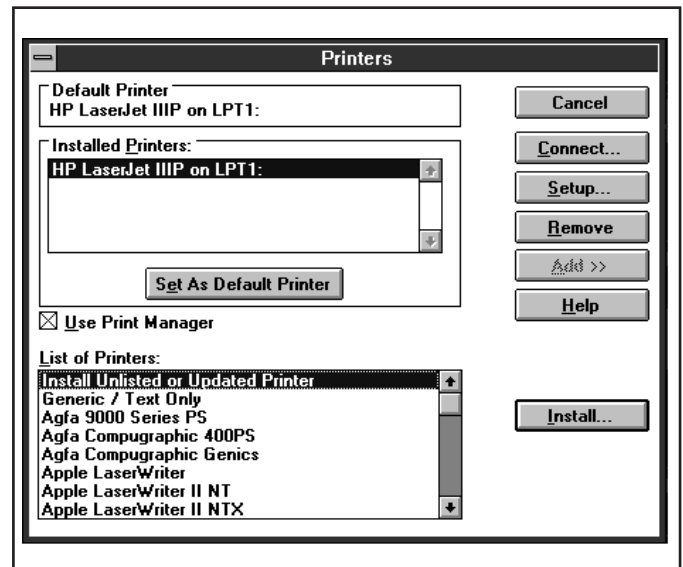
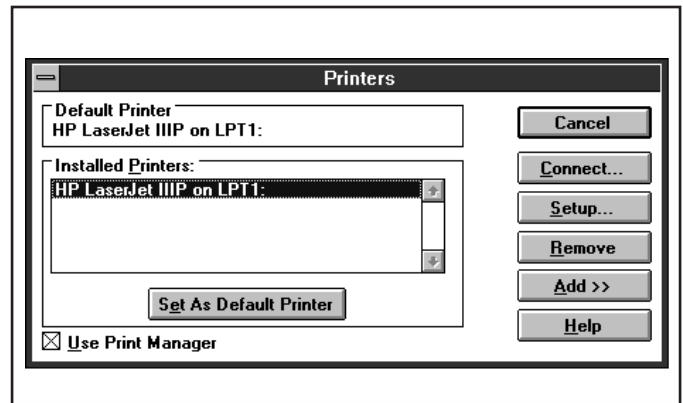
3. For best performance, **Use Print Manager** at the bottom left of the **Printers** group (should have an "X").

4. Select the **Add>>** button.

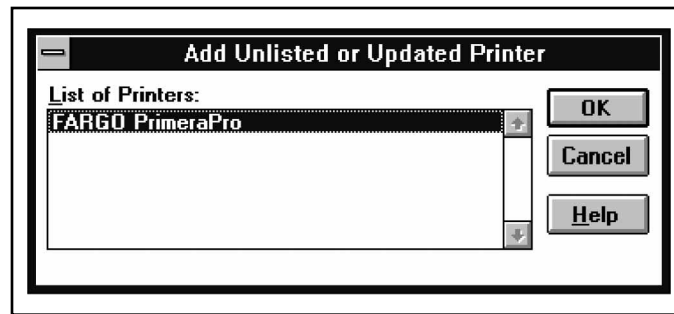
5. Highlight the **Install Unlisted or Updated Printer** option from **List of Printers**.

6. Select the **Install** button.

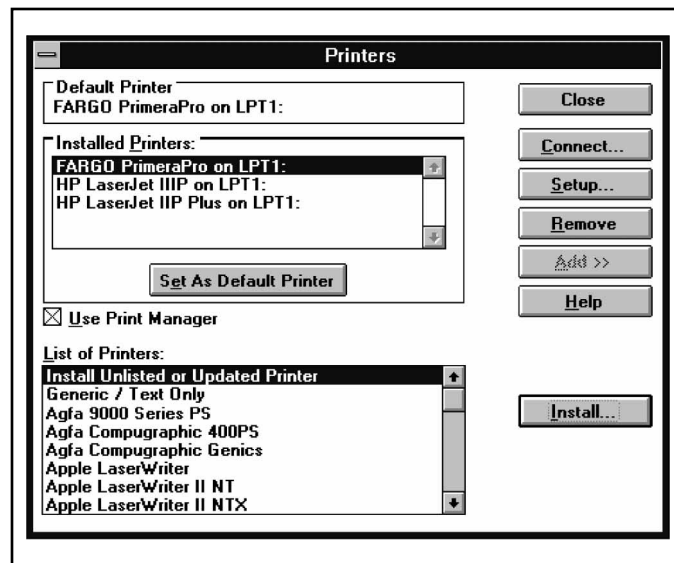
7. Insert the supplied PrimeraPro Printer Driver diskette into your computer's A: or B: (3-1/2") disk drive. If you insert the diskette in a drive other than the A: drive displayed in the **Install Driver** dialog box, you must change the drive designation. Select the **OK** button.



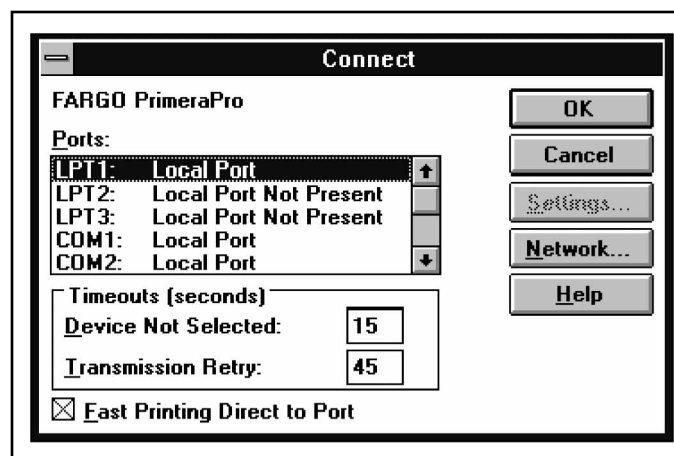
8. FARGO PrimeraPro should now be listed in the **Add Unlisted or Updated Printer** dialog box. Select the **OK** button. Your PC's disk drive will now load PrimeraPro's printer driver. Depending upon your computer, loading will take about 10 to 20 seconds.



9. Select the **Set As Default Printer** button in the Printers window. PrimeraPro has now been selected as your default (main) printer. If you wish to use another printer later, you must de-select PrimeraPro and switch back to the other printer's driver.



10. Finally, select the **Connect** button. Check that the box called **Fast Printing Direct to Port** is selected (should contain an "X"). Although this option is not necessary, it helps the printer deliver maximum print speed and best overall performance. Select **OK** to exit the Connect window. Select **Close** to exit the Printers window. See section C for information on printer driver settings and options.



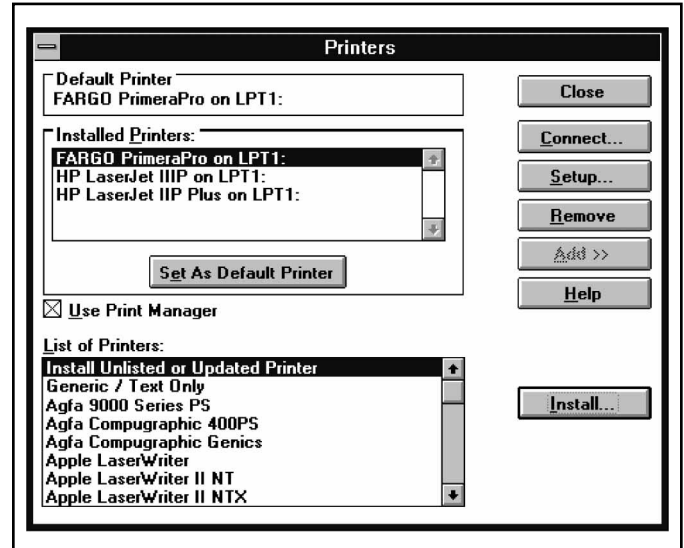
C. Using PrimeraPro's Windows 3.1 Printer Driver

1. Go back to the Control Panel and the Printers group using steps 1 and 2 on page 33.
2. Select the Setup button.

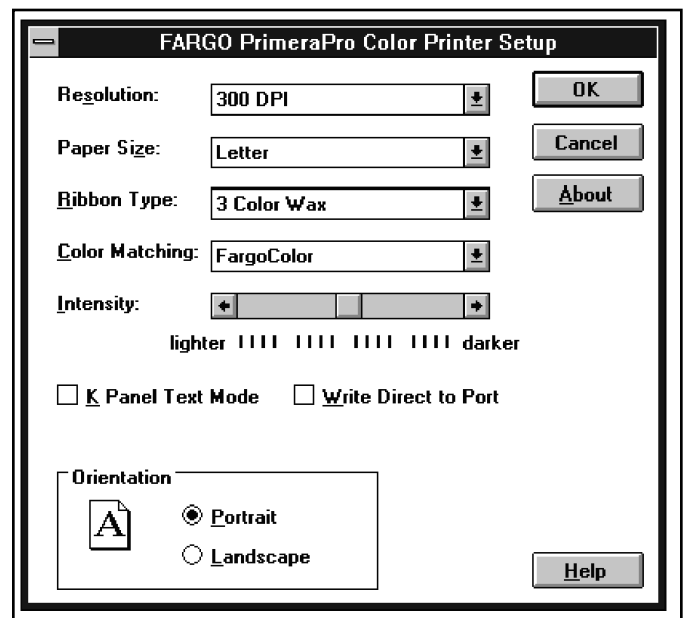
NOTE

3. The FARGO PrimeraPro Color Printer on LPT1 screen appears. Change the options as follows:

Once the printer driver has been successfully installed, you will need to set the driver up for the type of paper and ribbon used. There are also several additional options that can be selected. Use the following steps to initially set up the driver and to make changes later on:

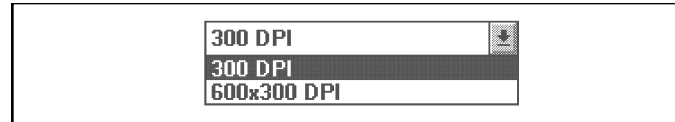


Some applications allow you to change these same printer driver options from their "Print" and/or "Printer Setup" screens. This means that you don't have to go back to Control Panel each time you want to change a setting or option in PrimeraPro's printer driver. These applications will usually give you the same choices and options, but in a slightly altered format.



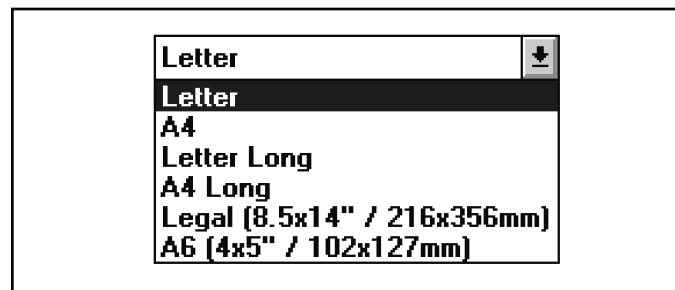
Resolution

Click on the **Resolution** down arrow. Two selections appear: 300 DPI (dots per inch) or 600 x 300 DPI. The 300 DPI setting offers high resolution output at the printer's standard print resolution. The 600 x 300 DPI setting offers an increased resolution print for highly detailed graphics and text printing. Printing with the 600 x 300 DPI setting selected will increase the time needed for rasterization and for printing, and will also require more free space available on your hard disk. Select the option that is appropriate for the print resolution you desire.



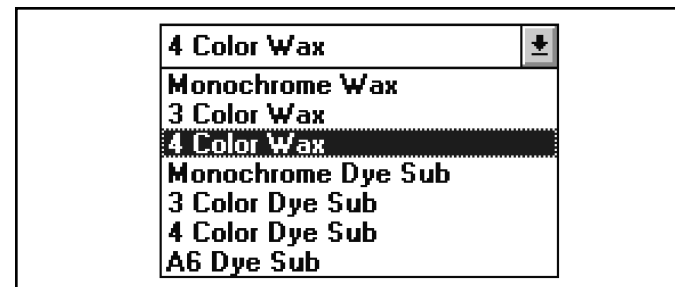
Paper Size

Click on the **Paper Size** down arrow. A list of paper size selections will appear. Select the one that's appropriate for the media size you are using. (See page 24 for important paper size information)



Ribbon Type

Click on the **Ribbon Type** down arrow. A list of ribbon selections will appear. Select the ribbon type option that's appropriate for the type of ribbon you are using. (See Section 4 for ribbon information).



Color Matching

Click on the Color Matching down arrow and select the appropriate color matching option. Select **None** if you are more interested in print speed rather than print color, if you have already color corrected

your image for printing, or if you are using some other third party color matching software.

Select **Algebraic** if you would like the printer driver to make very simple, yet fast, color balance adjustments. This option gives you more natural looking images without actually utilizing any specific color matching software and without slowing down the processing speed of the printer driver.

Select **FargoColor** to enable color matching profiles written specifically for your printer. This option automatically adjusts the color of your image according to preconfigured printer profiles and default system profiles. This results in a very precise color match compliant with ICC standards. (NOTE: Since the FargoColor option is intended to match color *hues* as closely as possible, you may notice that some colors may appear slightly muted when printing simple spot colors.)

Since the default system profiles provided are generic, the colors of some monitors may still vary slightly from your output. As a solution, raw printer profiles are included with this upgrade in case you would like to combine your custom monitor profiles with the printer profiles. This is done using ColorSynergy™ software by Candela®, Ltd. This program can also be used to create your own custom printer profiles. For more information on ColorSynergy, contact FARGO.

Intensity

This control sets the lightness / darkness of the printed image. Place your mouse pointer on the box or on the left and right arrows to change the amount of heat used in the printing process.

K Panel Text Mode

Select this option if you wish to print all gray scale text with the ribbon's black panel only. Normally, when printing gray scale or black text, PrimeraPro lays down all four of the ribbon's color panels. By laying down only the black panel, PrimeraPro is able to print black text with more sharpness and definition. Processing time may slightly increase when this option is selected. Please note that some applications may not support this option.

Write Direct to Port

Selecting this option allows PrimeraPro's printer driver to bypass Print Manager and to send all print data directly to PrimeraPro. When selected, this option devotes all of your system resources to the current print job, thus, increasing print speed. When the print job is finished, your system

resources will again be devoted to the normal function of your on-screen applications.

Depending upon the processing speed and brand of your computer, you may or may not need to select this option when printing with PrimeraPro. For most computers, selecting this option will enhance the rasterizing and printing process. In this case, the **Write Direct to Port** option should be selected. For some computers, however, this option may either not be supported by the particular brand of PC or simply may not be necessary due to the PC's fast processing speed. In this case, the **Write Direct to Port** option should not be selected. If you choose not to select this option, all print jobs should be sent through Print Manager in order to achieve the highest print quality.

NOTE:

*When the **Write Direct to Port** option is selected, the Print to File option found within many Windows application programs is not supported. The Print to File option is supported only when printing through Print Manager.*

Orientation

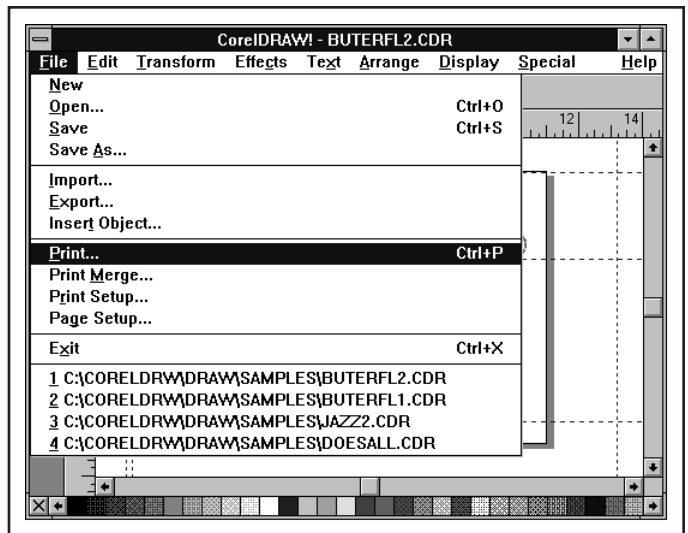
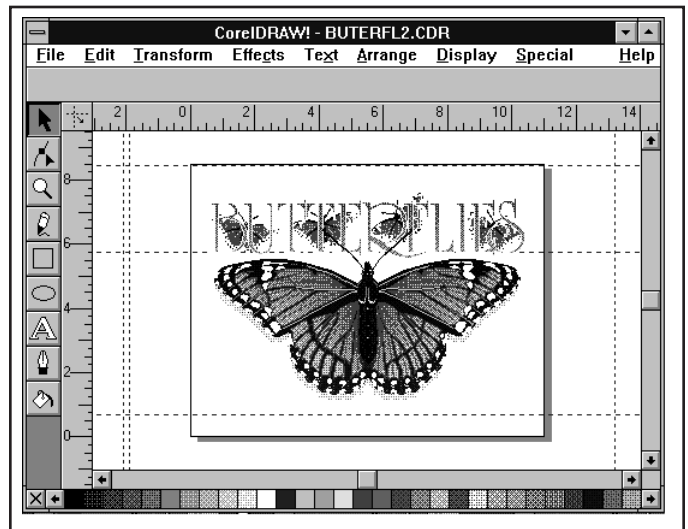
Select either Portrait or Landscape. *Portrait* causes the page to print in the upright position where text is printed across the width of the page (8.5" x 11"). *Landscape* causes the page to print in the sideways position where text is printed across the length of the page (11" x 8.5"). An icon illustrating a printed page in the dialog box helps you remember the difference between the two.

4. After your selections have been made, press the **OK** button to return to the **Printers** group. Press **Close** to return to the **Control Panel** group. Exit the **Control Panel** and you're ready to go to an application program and print. All printer driver options you selected will stay the same until you change them.

D. Printing a Color Page

Now that you've set up the printer, loaded media, and installed the printer driver, you're ready to print a color page! Follow these steps to print your first image:

1. Go to your favorite Windows application program.
2. After you've created an image, press the **Print** button from the application's Print screen.



3. PrimeraPro's RIP (raster image processing) begins. Depending upon the complexity of the image and the processing speed of your computer, it will take from just a few seconds to several minutes for printing to begin. Generally, photos and complicated graphics (like many of those from programs like Corel Draw!®, Micrografx® Designer™ and other high quality imaging programs) take longer than spreadsheet data, graphs and charts.

4. A page of paper will feed in, print the first color (yellow), and then proceed to print the remaining colors (Magenta, Cyan, and Black, if using a four color ribbon). Wait until all the panels have printed and the sheet is fully ejected before trying to pull it out of the printer.

5. If everything looks good and you've printed your first page of color output, *congratulations!* You've successfully completed set-up and initial testing.

A. Connecting PrimeraPro to Your Macintosh

PrimeraPro for the Macintosh is designed to be used with any Apple Macintosh supporting Color QuickDraw. The FARGO driver uses Apple's 32 bit Color QuickDraw graphics language to generate its printed color images, and can produce high-resolution prints with accurate formatting in up to 16.7 million colors per page. The driver cannot be used on the Macintosh Plus, SE, or Classic because these models do not support Color QuickDraw.

Minimum System Requirements

- 8 Mb of memory. The speed of the driver is increased with more memory.
- A hard disk drive with at least 5 Mb of space free.
- System software 6.0.3 or higher. The FARGO driver is compatible with Kanji System Software, and can print Japanese and other two-byte character sets.

Recommended

- 16 Mb or more of memory.
- System software 7.0 or higher.
- A hard disk drive with at least 50Mb of space free.
- Adobe Type Manager™ and/or *System 7* TrueType™ fonts. These can be used with the FARGO driver to produce high-quality text.

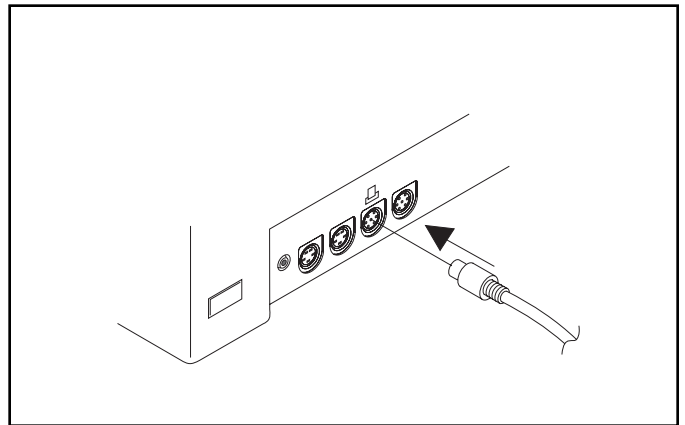
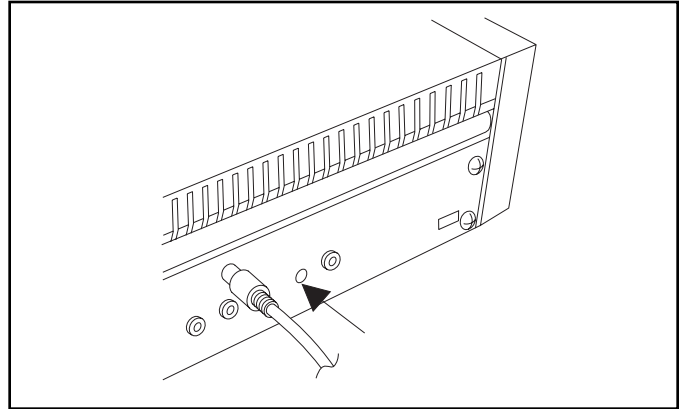
PrimeraPro can either be connected directly to your Macintosh's printer port or to your AppleTalk™ Network. If connecting directly to a Macintosh, use a standard serial cable with an 8 pin mini-DIN connection on each end. If connecting to an AppleTalk Network, use any LocalTalk connector that is compatible with your specific network. If you wish to connect PrimeraPro to an Ethernet Network, optional interface adapters are available from your dealer or directly from FARGO for Twisted Pair Apple Ethernet or for Thin Coax Apple Ethernet.



Using PrimeraPro With An Apple Macintosh

Quick Start

If you want to start using your color printer right away, follow this quick start guide. If you are unsure of any of the procedures, refer to the detailed instructions on the following pages.



1. Connect your PrimeraPro to your AppleTalk Network or directly to the Printer port (not the modem port) on your Macintosh.
2. Install the FARGO driver.
3. Use the Chooser to select the driver you have just installed.
4. Select **Page Setup** from the File menu to select the appropriate printer setup choices. The print quality should be set to 300 x 300 for most printing applications.
5. Select **Print** from the File menu to print your document. Make Sure you select the **Print: Now** option until you are familiar with the FARGO Backgrounder (refer to Section 8 of this guide for Backgrounder information).

B. Installing the FARGO Driver

Installation

Insert the driver disk (disk #1 if driver is on multiple disks) into the disk drive of your Macintosh. When the disk icon appears on your desktop, double-click on the disk icon to open the

disk window. Then double-click on the READ ME file to get the latest information about the driver and the installation process. **Carefully read the document** as it will help you get the best results from your printer. Select **Quit** from the File menu when you are done reading.

Now, double-click on the PrimeraPro Installer icon. When the Installer window appears, select the options you would like the installer program to install. In most instances, the default selections will suffice. For a description of each of these options, refer to the notes found in the box directly above these options (use the up and down arrows to scroll through the notes). Once the desired options are selected, click on **Install**. If the driver is on multiple disks, the installer will prompt you as to when each disk is to be inserted. The appropriate files will automatically install onto your computer. An alert box will then display indicating that installation is complete. Click on **OK** to exit the Installer.

NOTE

As an added feature, a print utility called the FARGO Backgrounder is included with your PrimeraPro printer driver. Although installing this feature is not essential to the initial operation of the printer, you may wish to utilize the Backgrounder at a later date. For installation instructions and for more information on the FARGO Backgrounder, refer to Section 8 of this manual.

The Chooser

The Chooser is a Desk Accessory in the **Apple** menu. Before you can use the PrimeraPro color printer, you need to select the FARGO printer driver using the Chooser. This instructs the Macintosh to send documents to the PrimeraPro, instead of to the LaserWriter® or to the ImageWriter®.

The Chooser displays an icon for all the printer drivers in the System Folder (you may need to scroll through the list to see all of them). You should see the icon for the FARGO driver that was copied from the original floppy disk. If you do not see the driver, go through the above installation procedure once more making sure that the **Install Driver** box is selected before you click on **Install**.

Click on the icon for the FARGO PrimeraPro and make AppleTalk active. Select your printer from the list of FARGO printers on the right side of the Chooser's dialog box. The PrimeraPro uses an automatic naming convention and does not support the Apple Namer program. The first printer

connected to the network will be named FargoPrimera001, the second will be named FargoPrimera002, and so on. If your printer does not appear on the list, be sure that it has power and is connected properly to your computer or network.

Finally, Select either **On** or **Off** to enable or disable the Background Printing function. When enabled, this function allows you to work in the foreground of your application program while printing in the background. Please refer to Section 8 for more information on background printing.

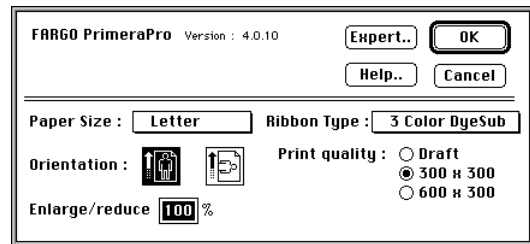
NOTE

The next time you open the Chooser, the selected driver will no longer be highlighted. The Chooser, however, remembers which driver is the current one, but does not display it when opened.

C. Using the FARGO Driver

Page Setup

Before printing a document on the PrimeraPro, you must select **Page Setup** from the **File** menu. The **Page Setup** dialog box displays all of the available printer driver options. Use the following descriptions to select the appropriate printer driver options for your current print job.



Page Setup dialog box

The **Paper Size** option specifies the size of media on which you are printing. Select the one that is appropriate for the media size you are using. The **Ribbon type** option specifies the type of ribbon with which you are printing. Select the ribbon type option that is appropriate for the type of ribbon you are using.

Please note that the A6 paper size option is active only when the Photo-Realistic ribbon type is selected. This paper size should only be selected when printing with the special A6-size, dye-sublimation ribbon and paper installed in your printer. All paper sizes and ribbon types are discussed in further detail in Section 4 of this manual.

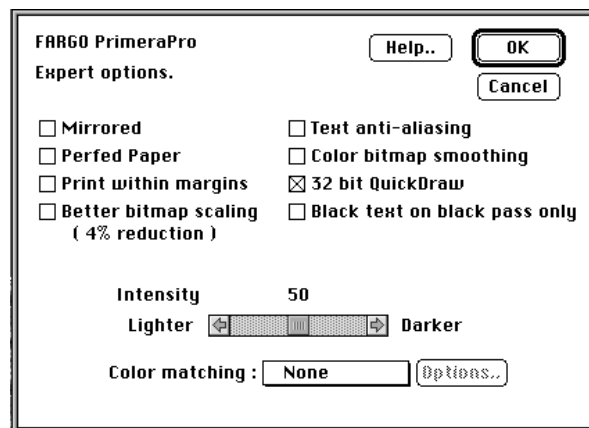
The **Print Quality** option determines at which resolution the document will be printed. Draft will provide a quick print at screen (72 dpi) resolution. Since rasterization is done at a lower resolution, the printer will begin printing faster. The 300 x 300 selection will give much better results but will require more time for rasterization and more memory. The 600 x 300 selection is the highest quality output available but will increase the time needed for rasterization and printing. The higher resolution print modes will also require more free space available on your hard disk drive (the startup volume).

The **Enlarge/reduce** option alters the size of the printed document between the integers of 25% and 400% (a setting of 100% indicates the document will be printed at actual size).

An on line **Help** feature is also available in the **Page Setup** dialog box. This feature will assist you in understanding your options from the various PrimeraPro dialog boxes.

Expert Options

The FARGO driver has some options that rarely need to be changed. These options are contained within a separate **Expert options** dialog box, accessed from **Page Setup** by clicking on **Expert**.



Expert dialog box

Mirrored

When the Mirrored box is checked, the FARGO driver will print the image in a reversed format, making the printed image appear as if you were viewing it in a mirror. This is useful when printing images for thermal or T-shirt transfers.

Perfed Paper

When printing onto A-long or A4-long paper or transparency film with perfed extensions, you may find that PrimeraPro will print over the perfed lines if the printed image is large enough. To avoid this, simply select the **Perfed Paper** option. Selecting this will allow PrimeraPro to position the printed image only on the area of the paper within the perfed lines or extensions. This will lower your image .2" (5mm) and reduce the maximum printable length on the page to 10.8" for A-long print media or 292mm for A4-long print media.

Print within margins

Most color printers cannot print over the entire piece of paper. There is often a non-printable margin that the printer mechanism physically cannot reach. For the PrimeraPro, this non-printable margin is .5 inches on top and 1.2 inches on the bottom. Some applications do not take this non-printable margin into account when printing the document. The top left corner of the document on screen is positioned at the top left corner of the paper when printed. Selecting the **Print within margins** option in such applications forces the document to print at the top left corner of the printable area. Normally, you should not have to choose this option since the application usually adds its margins to the non-printable margin of the PrimeraPro.

Better bitmap scaling

When selected, this option reduces the distortion that can be seen sometimes in bitmaps and bit-mapped fonts when printed on a high-resolution printer. Bit mapped images are often stored and printed at screen resolution, 72 dots per inch (dpi). When a 72-dpi bitmap is printed on a high-resolution printer, the number of dots in the image must be increased. Each dot on the printer is smaller than a pixel on the screen; therefore, dots must be added to maintain the overall size. This option is rarely used and only useful for low resolution images (100 DPI or less).

When the PrimeraPro prints at 300 DPI print quality, for every dot in the original bitmap, the driver theoretically has to put 4.2 dots across and down the page. Of course, the printer cannot put fractions of a dot on the paper. The driver therefore increases the number of dots by four, or sometimes by five, to even out the fractions.

Making the dots four or five times larger, however, can make the bitmaps look ragged. The Better bitmap scaling option works by enlarging the size of the print enough for all 72-dpi bitmaps to be printed with an integer dot increase. If this option is selected, however, the image printed will be reduced in size by 4%.

Text Anti-Aliasing

This option is only available when printing with the photo-realistic ribbon type. When selected, this option will improve the quality of printed text when using scalable fonts (*System 7* TrueType or Postscript Type 1 fonts with Adobe Type Manager).

Color Bitmap Smoothing

This option is also only available when printing with the photo-realistic ribbon type. When selected, this option will improve the appearance of lower resolution images. Image processing time will be increased when using this option. This option is rarely used and only useful for low resolution images (100 DPI or less).

32 bit QuickDraw

This option is available if the Macintosh has 32 bit QuickDraw installed (it's built in on some Macintosh models, or supplied as a separate file for others). Selecting this option increases the maximum number of colors the FARGO driver can print from 256 to 16.7 million. Most prints take longer to process when this option is selected.

Black text on black pass only

Select this option if you wish to print all gray scale text with the ribbon's black panel only. Normally, when printing gray scale or black text, PrimeraPro lays down all four of the ribbon's color panels. By laying down only the black panel, PrimeraPro is able to print black text with more sharpness and definition. Processing time may slightly increase when this option is selected.

Intensity

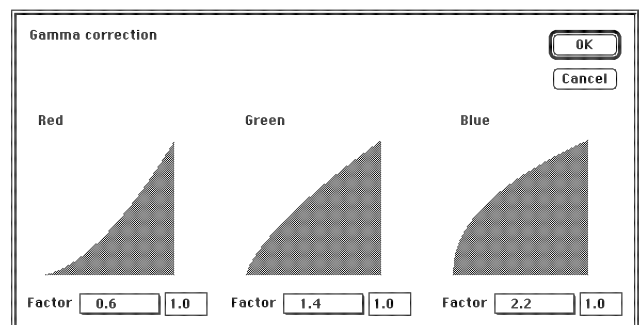
This control alters the lightness or darkness of the printed image. Use your mouse to slide the box along the intensity bar or to click on the left or right arrows to adjust the amount of heat used in the printing process.

Color matching

Click on the Color Matching box and select the appropriate color matching option. Select **None** if you are more interested in print speed rather than

print color, if you have already color corrected your image for printing, or if you are using some other third party color matching software.

When the **Gamma** method is selected, you can access the gamma correction method by clicking on **Options**. Through gamma correction, the FARGO driver allows you to individually increase or decrease the intensity of the red, green, and blue components of the print. A graphical representation of each gamma curve follows. A curve that bends inward (produced with a Gamma factor less than 1.0) darkens that color component. A curve that bends outward lightens it. A Gamma Factor of 1.0 produces a straight line that does not adjust the color component at all.



Gamma Correction dialog box

The Gamma correction values affect every color on the printed page, lightening or darkening the Red/Green/Blue values in each of those colors as specified. The correction values you choose are stored separately for each document. If another document is opened, the previous correction values for that document are used.

Select the **FargoColor** option to enable color matching profiles written specifically for your printer. This option automatically adjusts the color of your image according to preconfigured printer profiles and default system profiles. This results in a very precise color match compliant with ICC standards. (NOTE: Since the FargoColor option is intended to match color *hues* as closely as possible, you may notice that some colors may appear slightly muted when printing simple spot colors.)

Since the default system profiles provided are generic, the colors of some monitors may still vary slightly from your output. As a solution, raw printer profiles are included with this upgrade in case you would like to combine your custom monitor profiles with the printer profiles. This is

done using ColorSynergy™ software by Candela®, Ltd. This program can also be used to create your own custom printer profiles. For more information on ColorSynergy, contact FARGO.

The **ColorSync™** option is available only if you selected the **Install ColorSync 2.0** option from within the printer driver installer program when installing the PrimeraPro printer driver. The printer driver installation procedure is described in Section 7-B. Selecting the **ColorSync** option forces a ColorSync match to be performed on the image to be printed. The following **ColorSync** options are available:

Perceptual: All the colors of a given source profile are scaled to fit within the range of colors that can be printed. The colors maintain their relative positions, so the relationship between colors is maintained.

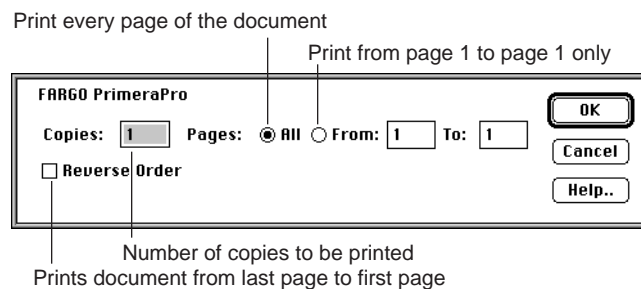
Solid Color Relative: All colors that fall within the range of both source and printer profiles are left unchanged. This type of color matching allows some colors to be exactly the same. A disadvantage of this type of matching is that many colors may map to a single color resulting in tone compression.

Saturation: The relative saturation of colors is maintained from the source to the printer. Colors outside the range of the printer are converted to colors with the same saturation, but different lightness.

ColorSync also supports three different **Quality** levels: Best, Normal, and Draft. The better the quality, the longer the image will take to process. Choose these options accordingly.

D. Printing a Color Page

To print a document, select the **Print** command from the **File** menu. The Print dialog box displays:



Print dialog box

Type the number of copies you require into the **Copies** box. Select **All** to print the entire document, or **From** to print a range of pages. Specify the range by typing the first and last page numbers (inclusively) into the boxes. Select **Reverse Order** to print the last page of your document first and your first page last.

Click **OK** to print the document. Status messages display during processing:

Document : Brochure Page 1 of 1, copy 1 of 1 : Processing, 0% complete

NOTE

Before printing, check that the printer has paper and the proper ribbon installed, and that it is powered on. Both the power and On Line lights should remain solid throughout the printing process. If the On Line begins to flash, refer to Section 11 of this manual.

Miscellaneous

MultiFinder

When using the FARGO driver with MultiFinder, you may need to increase the amount of memory allocated to the application that is printing. The preset memory size for many applications is too small for the FARGO driver to work efficiently. Before using an application with MultiFinder, increase the memory by 1-2 Mb beyond the suggested size.

NOTE

Less memory is required by the application if the FARGO Backgrounder is being used. Since Backgrounder processes the print job, the extra memory is allocated to it, instead of the application.

Fonts

The FARGO driver works with any Macintosh bitmapped font that is installed in the System File. The FARGO driver also works with Adobe Type Manager (ATM) and System 7 TrueType fonts. When using ATM, a font cache of at least 256K is recommended. Problems with poor quality text at very large point sizes are usually caused by ATM having a font cache that is too small.

A. Introduction to Background Printing

Printing documents with the FARGO driver normally takes place in the “foreground;” therefore, the computer cannot do any other work until the print is complete. Processing the print in the “background,” allows the computer to do other work for you at the same time in the foreground.

The FARGO driver provides a background printing facility via the FARGO Backgrounder. The FARGO Backgrounder is an application program which is included on your PrimeraPro driver diskette. Once the Backgrounder is installed, it enables you to process print jobs in the background while you continue with other work in the foreground. If you print several documents at a time, Backgrounder queues them up and processes them in order. The number of print jobs running within Backgrounder is limited only by the available space on your hard disk.

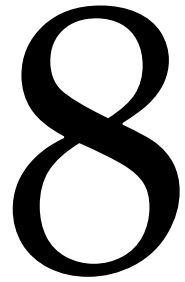
FARGO Backgrounder System Requirements

The FARGO Backgrounder has the same System requirements as the FARGO driver. In addition, however:

- To print documents in the background, the Macintosh must be using MultiFinder or *System 7*. FARGO Backgrounder can also be used for batch printing, which does not require MultiFinder. Refer to page 57 in this manual for more information about batch printing.
- Your System may require more memory when using MultiFinder, depending on which applications you use.
- More hard disk space may be needed to hold documents that are waiting to be processed by Backgrounder.

B. Installing The FARGO Backgrounder

The Backgrounder is installed by selecting the **Install Backgrounder** option from within the printer driver’s installer program. This option is pre-selected when you first install the printer driver. Therefore, if you did not deselect the Backgrounder option when installing the printer driver, it is most likely already installed. The Backgrounder installs into the Extensions folder of your startup drive. If you cannot locate Backgrounder, simply go through the printer driver installation procedure described in Section 7-B making sure that the **Install Backgrounder** option is selected. Once installed, Backgrounder will



Using The FARGO Backgrounder For Macintosh

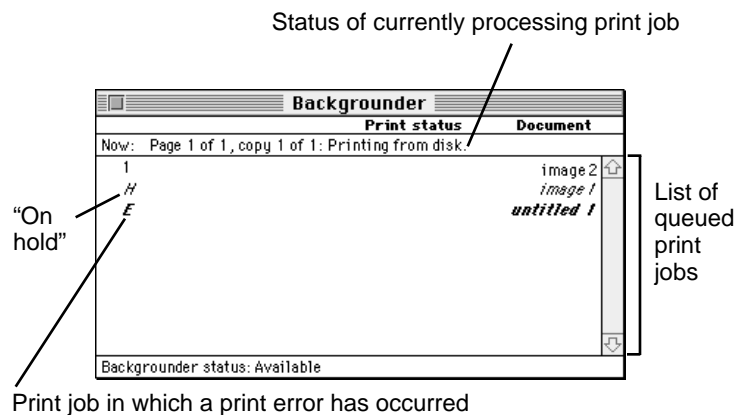
automatically open and close with the start and finish of each print job. To manually open Backgrounder, double click on the Print Backgrounder icon within the Extensions folder.

C. Printing With The FARGO Backgrounder

With the Backgrounder turned on in the Chooser, select **Print** from the File menu to print your image. A message appears telling you the image is being spooled to disk for Background/Later processing. Once the message disappears, background processing has begun and your application is free to be used for other work. Once Backgrounder has processed the print job and PrimeraPro is actually printing, be sure not to do things that will tie up your system for a long period of time (i.e., load large images into an application, launch a large application, format a disk, etc.). Such action will affect print quality.

The print job is processed automatically by the Backgrounder. Other documents can be printed and, in turn, will be processed by Backgrounder. While Backgrounder is running, you can quit the current application and start another without disturbing your print jobs. Backgrounder processes all print jobs in the order in which they were sent to the printer.

D. The Backgrounder Status Window



The Backgrounder status window gives you detailed information about the status of the print job currently processing and about each print job waiting in the queue. The status of the job currently processing displays at the top of the status window. The message indicates how much of the job has been processed and displays any other relevant information. This line is blank if, for example, you manually start Backgrounder and no job is currently being processed.

The list of queued jobs displays below the current job in the order in which they were sent to the printer. Some applications, however, may put each page of the document into a separate spool file, creating a different job in the queue for each page. Print jobs are always added to the bottom of the queue. When the job currently processing is complete, the spool file for that job is deleted from the hard disk, and the top-most job in the queue is then processed.

Jobs that are “on hold” are displayed at the bottom of the job list in italic font. A job goes on hold when it has been canceled or when an error is detected during processing. An overall status message about the Backgrounder displays in the lower left corner of the window. The normal message is “Available,” indicating that the Backgrounder can process jobs immediately or add them to the queue.

E. FARGO Backgrounder Menus

File menu

Open Status Window and Close Status Window: Opens and closes the Backgrounder status window. The FARGO Backgrounder continues to work if the status window is closed.

Log Files: The FARGO Backgrounder has the ability to create and maintain a sequential history file, or **Log** file, of Backgrounder print jobs. This Log file can be enabled and manipulated with the following commands on the **File** menu:

New Log File: Selects a new file in which to maintain your ongoing Backgrounder printing log.

Save Copy of Log as: Saves the current Log file to a new file name or location of your specification.

Start Recording Log: Begins logging print history. Before the Log file is started, you are asked to specify a Log file in which to save your processed print job entries. When logging begins, this option dims.

Stop Recording Log: Stops logging print history. This option dims once print logging stops.

Get Info: Provides additional information about the currently selected print job. Click on the processing job or any job in the queue, before selecting Get Info.

NOTE

Double-clicking on a job in the status window is a shortcut for Get Info.

Quit: Exits the Backgrounder. Note that you cannot quit while a job is being processed (see **Stop Processing** on the following page). All jobs in the queue are retained and processed when FARGO Backgrounder is next started.

NOTE

The spool files are stored in the "Spool Folder," inside the "System Folder." If these files are deleted, the corresponding print jobs will be lost, and must be printed again.

Admin menu

Stop Processing: Stops the FARGO Backgrounder from processing any jobs, although it will still receive them and add them to the queue. A dialog box is displayed if Stop Processing is selected while Backgrounder is processing a job, asking when the job should be put on hold. The Backgrounder status box in the lower-left corner of the window indicates that Backgrounder has stopped.

You cannot quit from Backgrounder while it is processing a job. **Stop Processing** must first be selected to cancel the processing job and stop Backgrounder. When Backgrounder stops, the menu changes to **Continue Processing**. When selected, the server starts processing the top job in the queue.

Preferences: Presents a dialog box containing options for fine-tuning the FARGO Backgrounder. **Background printing priority** determines how much time the Mac spends processing the image, and how much time it spends in the foreground application (interpreting mouse clicks, key presses etc.). When the priority is set to **High**, Backgrounder processes the image faster, but the foreground application may become less responsive. With the priority set to **Low**, Backgrounder takes longer to process the image, yet the responsiveness of the other applications is improved.

Jobs menu

All commands in the Jobs menu act on the currently selected job.

Hold: Prevents an individual job from being processed. Jobs that are "on hold" are displayed in italic font at the bottom of the queue. Placing a job

on hold is useful if you wish to create a print job at present, yet save its processing until later.

If **Hold** is selected on the job currently processing, the job is canceled before it is placed on hold. Canceling the current job can take some time, since the printer software may be performing a lengthy task that cannot be interrupted.

Remove Hold: Moves the job from the hold section of the list and places it at the bottom of the waiting queue.

Delete: Permanently removes the selected print job. The corresponding spool file is deleted from the Spool Folder. Use this command only when you are sure that you do not wish to process the job. Note that the job currently processing cannot be deleted (this happens automatically when it is printed successfully).

Move Job Up and Move Job Down: Adjusts the position of the selected job in the queue, allowing you to prioritize jobs. The queue is processed in top-to-bottom order.

F. Problems During a Background Print

Errors that are detected during a background print must be reported. The FARGO Backgrounder, however, cannot simply present a dialog box as soon as the error occurs, since the dialog could obscure work that is being done in the foreground program. Error dialogs appear immediately if the FARGO Backgrounder is in the foreground when the error is detected.

If operating in the background, Backgrounder stops processing until it is brought to the front. When Backgrounder detects an error, it beeps and visually indicates an error condition. This error condition is signaled by alternately flashing between the Application menu and the Backgrounder icon. A small diamond symbol is also displayed next to the FARGO Backgrounder icon within the Application menu.

Complete and save any work in the foreground application before bringing the FARGO Backgrounder to the front.

Once Backgrounder is in the foreground, the error dialog displays and processing continues or is canceled. Some errors force Backgrounder to stop processing all jobs.

G. Tips for Using FARGO Backgrounder

Memory Usage

The FARGO Backgrounder processes documents faster if it is given more memory in which to operate. You can change the amount of memory used by Backgrounder by clicking on the Backgrounder icon and selecting **Get Info** from the **File** menu. Type the desired amount of allocated memory into the box in the lower, right-hand corner (this is not possible while Backgrounder is running). Remember that increasing the memory for Backgrounder decreases the amount available to the other programs.

NOTE

You should start Backgrounder before starting any other applications. The remaining memory is then available in a single block, rather than in smaller, segmented blocks.

Batch Printing

When configured properly, the FARGO Backgrounder can be used to process a large print run when the computer is not normally in use (for example, during a lunch break or overnight). This type of printing is called “batch” printing. To create a batch print, simply print the required print jobs with the **Background/Later** option of the Print dialog box selected. Do this, however, *without* actually starting the Backgrounder.

Spool files are stored on the hard disk and remain on disk even when Backgrounder is not running. Backgrounder looks for new spool files each time it is started and adds any that it finds to the list of queued print jobs. When you choose to process the batch of spool files, start the Backgrounder. Backgrounder then locates and automatically processes all new print jobs.

A. Connecting PrimeraPro To Your Amiga

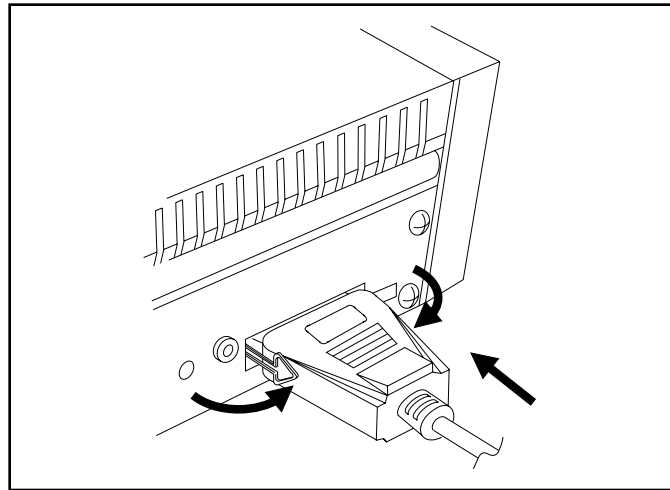
IMPORTANT NOTE

PrimeraPro is designed to be used with nearly any Amiga with system software 2.x or higher. Your system must have a minimum of 2 meg of RAM to work with PrimeraPro, however, 4 meg of RAM or higher is recommended.

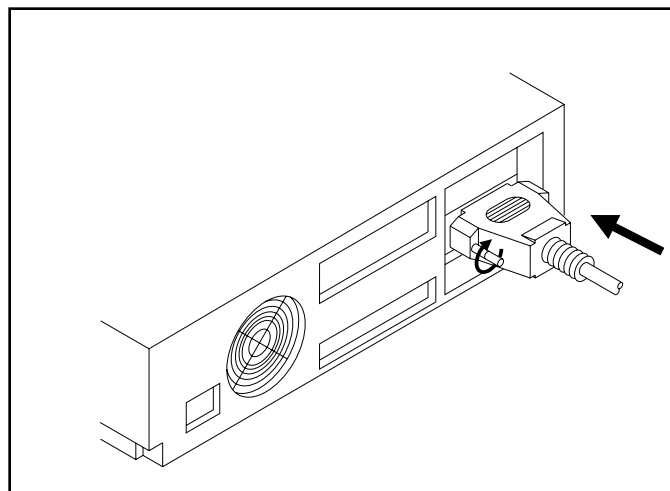
PrimeraPro uses a standard Centronics-type parallel port. Obtain the correct cable (not included) from your dealer or from FARGO and connect PrimeraPro to your Amiga as follows:

***ALWAYS** connect the printer with the power OFF to both the PrimeraPro and the Amiga. Failure to do so may damage, or at least lock-up the parallel port on the Amiga. Also, do not use parallel cables longer than 6 feet. If you experience a data transmission error (indicated by a slow flashing On Line LED) try printing with a shorter, shielded parallel cable.*

1. Connect the Centronics-type parallel side to the PrimeraPro. Snap the fastening clips into place.



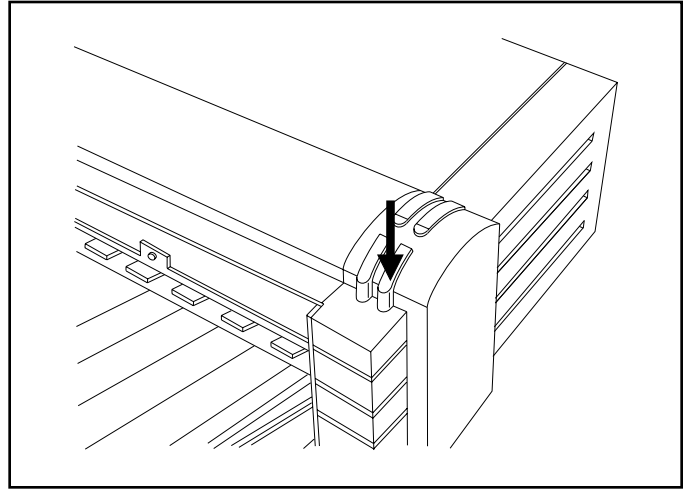
2. Connect the other side to the back of your Amiga at the PARALLEL connector and tighten the cable's fastening screws.



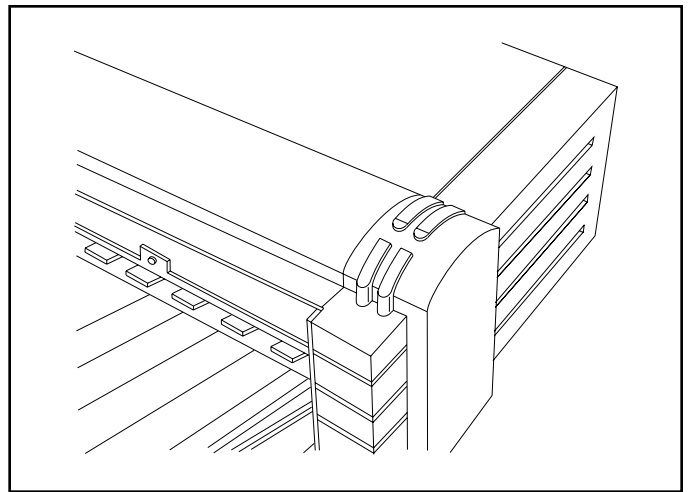
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Using
PrimeraPro
With A
Commodore
Amiga

3. PrimeraPro must have its On Line light illuminated to receive data. If the light is not on, press the On Line switch.



4. If the On Line light is flashing, check for a paper mis-feed or jam. Press the On Line switch to resume operation.



B. Installing the Amiga Printer Drivers

PrimeraPro can be used with a variety of Amiga software application programs. If your application program allows printing, it will more than likely be compatible with PrimeraPro. Before printing, you must first install the PrimeraPro printer driver and the FARGO: device print program for the Amiga.

The PrimeraPro driver, the FARGO: device print program, and the installation software have been provided on an Amiga DOS, 3.5" diskette. To install the printer software, insert the diskette in an available drive, open the disk icon and double-click the Install icon. The installation program will then install PrimeraPro's Preferences printer driver and the FARGO: device print program. Installation may also be done from a shell prompt. View the README file for instructions. Both the Preferences printer driver and the FARGO: device print program are explained in the following sections.

C. Using PrimeraPro's Preferences Printer Driver

Printer Preferences (sys:Prefs/Printer)

Use the Prefs/Printer program to select "PrimeraPro" as the current printer and set the other gadgets as described below. Other PrimeraPro files may be visible on the list but should not be selected.

Printer Type:	PrimeraPro
Printer Port:	Parallel
Paper Type:	Single
Paper Format:	U.S. Letter = A (8.5" x 11"). U.S. Legal = A-Long (A-size with tabs). Narrow Tractor = A4 (210mm x 297mm). Wide Tractor = A4-Long (A4-size with tabs). Other options are reserved and should not be used! Note: Use PPCI interface for paper size selection.

The other gadget settings do not affect PrimeraPro graphics printing and should be left as is for text printing.

For more information about the printable area for each paper size refer to page 24 of this manual. This will help you determine which paper size to use for your printing needs.

Graphics Printer Preferences (sys:Prefs/PrinterGfx)

Use the Prefs/PrinterGfx program to set the graphics printing parameters. The settings below are most common when printing to the PrimeraPro, although they are not required to be set as shown. Different applications may use or allow changes to these settings at print time. If a setting such as Density (or Resolution for some applications) is not seen within the application's print box, you may assume that it is using the Prefs setting. Prefs settings must be saved prior to entering the application's print box.

NOTE

The Floyd dither setting negatively effects colors when printing dye-sublimation output. If printing with the dye-sublimation process, use ordered dithering since it does not have an effect on dye-sublimation printing. Wax thermal transfer printing is not affected by this problem, so any dither pattern can be selected.

These settings are only suggestions. You may change them as needed for your application.

Dithering:	Ordered
Scaling:	Fraction
Image:	Positive
Aspect:	Vertical
Shade:	Color

Threshold:	7
Density:	1
Smoothing:	Not Checked
Center Picture:	Checked

Color Correction

Red:	Off
Green:	Off
Blue:	Off
Colors:	4096

The density or resolution of the printer is set by the PPCI program, so the density gadget tells the driver which type of wax ribbon you are using:

Density 1: 3 color wax ribbon (YMC).
Density 2: Monochrome wax ribbon (K).
Density 3: 4 color wax ribbon (YMCK).

With the exception of the Density setting, these gadgets should be set as you would for any graphics printer. Some experimentation may be necessary to achieve the desired results. For more information about PrimeraPro's various ribbon types, refer to page 17 of this manual.

PrimeraPro Control Interface (sys:WBStartup/PPCI)

PPCI is provided to allow additional control over the PrimeraPro's printing operation. Normally the PPCI program will be copied to the sys:WBStartup drawer so that it will execute on startup. The PrimeraPro driver will use default settings if PPCI does not alter them. Therefore, if you are not doing high-resolution or dye-sublimation printing, PPCI is not needed and may be removed. On the other hand, PPCI is needed for 600dpi or dye-sublimation printing and must be running, whether hidden (PopUp=No) or visible (PopUp=Yes, default), and may be run from startup or at any time prior to print time. Progress on the print job can be viewed on the PPCI in the IDLE window if the PPCI is left running during the print job.

The PPCI.info icon contains tool types which may be edited to alter the operation of the printer. However, this program may be ignored if you don't need to change the printer settings from the defaults (the heat setting is a common adjustment). The settings are as follows:

Tool Types:

DONOTWAIT	Terminate but Stay Resident (required).
(BaseName= device:drawer / name)	Remove "()" to specify temporary file location.
Heat=49	Heat Adjustment 1 to 96 (see manual).
WLeft=0	Left position of window on screen.
WTop=0	Top position of window on screen.
PopUp=Yes	Should window appear?
XOFFset=0	Shift image to right by number of pixels (at 300dpi=1 inch).
YOFFset=0	Shift image downward on page by number of pixels (at 300 or 600dpi=1 inch).
Paper=0	Paper size (0=A-size).
Ribbon=3	Ribbon Type (0=3color) (1=Mono) (2=4color) (3=3color Photo) (4=Mono Photo) (5=4color Photo) (6=A-6)

Tool Types: (Continued)

Disk Buf=OFF	Force disk buffering.
ToFile=No	Print to Printer (default) or to file.
High DPI=OFF	Selects 600x300 DPI.

Once the changes have been made, quit the PPCI and then reopen it to set the permanent changes.

Basename is the location of the temp file created during printing. The default is the same directory as PPCI resides. You may change it to a drive with more room if desired. Remove the parentheses “()” or this line is ignored. An example is “BaseName=Work:Temp/” which creates temp files to the Work:Temp drawer. If you specify PopUp=No, the PPCI will remain hidden but active. If you want to make it terminate, simply double-click on the PPCI icon again and the window will be forced to pop up. At that time you may “Quit” the program thus removing it from memory.

The PPCI control panel contains the following gadgets:

Window close button:	Program keeps running but is hidden.
Messages:	Shows progress of the print job.
Base path name:	Shows location of temp files.
Heat Control:	Allows adjustment of the PrimeraPro's printing temperature.
Ribbon Type:	Select ribbon
Paper Size:	Select paper
XOFFset:	Shift to right by x pixels.
YOFFset:	Shift down by y pixels.
Copies:	Uses the temp files over again to produce multiple prints quickly.
File:	Prints to specified file if checked.
Force Disk Buffer:	Force disk buffering to save RAM.
Quit:	When idle, terminates PCI.
Cancel:	When printing, aborts current print job.
High-DPI:	Checked for 600x300 DPI.

When canceling a print job you may need to turn the printer off and on to complete the cancellation and clear the paper from the printer. You will also need to cancel the print job from within the application.

Multitasking

If you want to print from applications which will be running simultaneously, the printer device will be locked by the first application to print until you have exited from that application's print box. If you attempt to print from the second application, a warning may or may not be issued to tell you that the printer is still in use (even if it is idle).

Applications

The PrimeraPro will print well with any application which uses the "Preferences Printer" interface properly. The PrimeraPro will *not* print well, however, from programs which dither the image before sending it to the printer. ADPro and a few other programs fall into this category. If you have questions about your particular program, contact the software manufacturer or FARGO Technical Support.

D. Using PrimeraPro's FARGO: Device Print Program

The PrimeraPro printer driver diskette also includes an additional print program called the FARGO: device which loads with the PPCI and shows up as an icon on the desktop. This device allows you to print images in full 24-bit color by bypassing the Preferences print function and, therefore, the color limitations which lie within. Any of the native Amiga file formats such as IFF, ILBM, Ham-6, or Ham-8 can be printed through the FARGO: device. The FARGO: device is only compatible with Amiga DOS version 2.x or higher.

To print through the FARGO: device, you simply **Copy As** or **Save As** the file to the FARGO: device rather than using the **Print** options from within the various software programs. You do not need to use the Print section of the software programs when printing through the FARGO: device. The PPCI is still used, however, to provide some of the controls such as ribbon and paper choices. The FARGO: device has a wide range of controls from A to Z.

For full instructions on these FARGO: device controls, you must refer to the PPCI.DOC file included on the PrimeraPro printer driver diskette. This PPCI.DOC file can be opened and read in any text program such as Directory Opus, Final Writer, etc. **You should also refer to the READ ME file contained on the printer driver diskette for further printer driver and FARGO: device information.**

In order to achieve the best output quality, always use 24-bit, high-resolution images native to the Amiga Operating System. If trying to print from a word processing program, remember that these programs do not allow you to save images in an IFF format but rather only allow you to save in a TXT or DOC format. Since these two formats are not native Amiga formats, you will not be able to print them through the FARGO: device unless you can export them to another program in an IFF format.

The following example shows how to print a typical image file through the FARGO: device:

Example: To print a file named PEARL.IFF from an application which you would like to be 8" high, 6" wide, and in landscape orientation:

1. Select the **Save As** option from the File menu.
2. Change the VOLUME name (or DRAWER in some applications) to **FARGO:** and the file name to **PEARL!LH8W6** (Note: The exclamation mark is used to start the information line.). This will save your image to the FARGO: device and print it at the specified height, width, and orientation. To print the same image fit to page and centered left to right, leave the filename as **PEARL.IFF**.

To print the same PEARL.IFF file with the same specifications from the shell, type the command line **COPY PEARL.IFF FARGO:!LH8W6**. This automatically sends the image to be printed in landscape orientation and at 8" high x 6" wide. When printing in this fashion, you are using the output to file option explained in the PPCI.DOC information.

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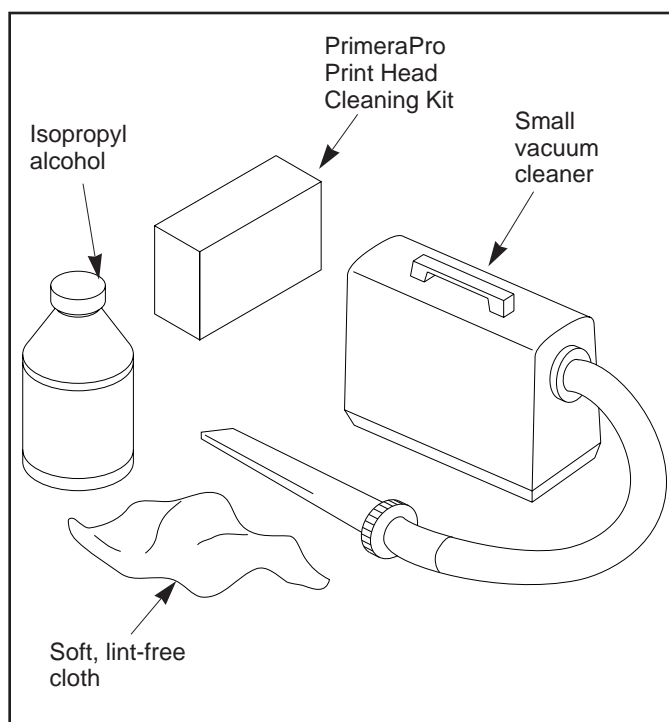
Maintenance

Your PrimeraPro is built to require a minimum of maintenance. Nevertheless, there are a few procedures that you can perform on a regular basis or as needed to ensure the best possible performance. In particular, the print head should be carefully cleaned on a regular basis for consistently high print quality.

A. Supplies Required

For the procedures listed below, you will need the following items:

- Isopropyl alcohol
- Soft, lint-free cloth
- Small vacuum cleaner (if available)
- Optional: PrimeraPro Print Head Cleaning Kit



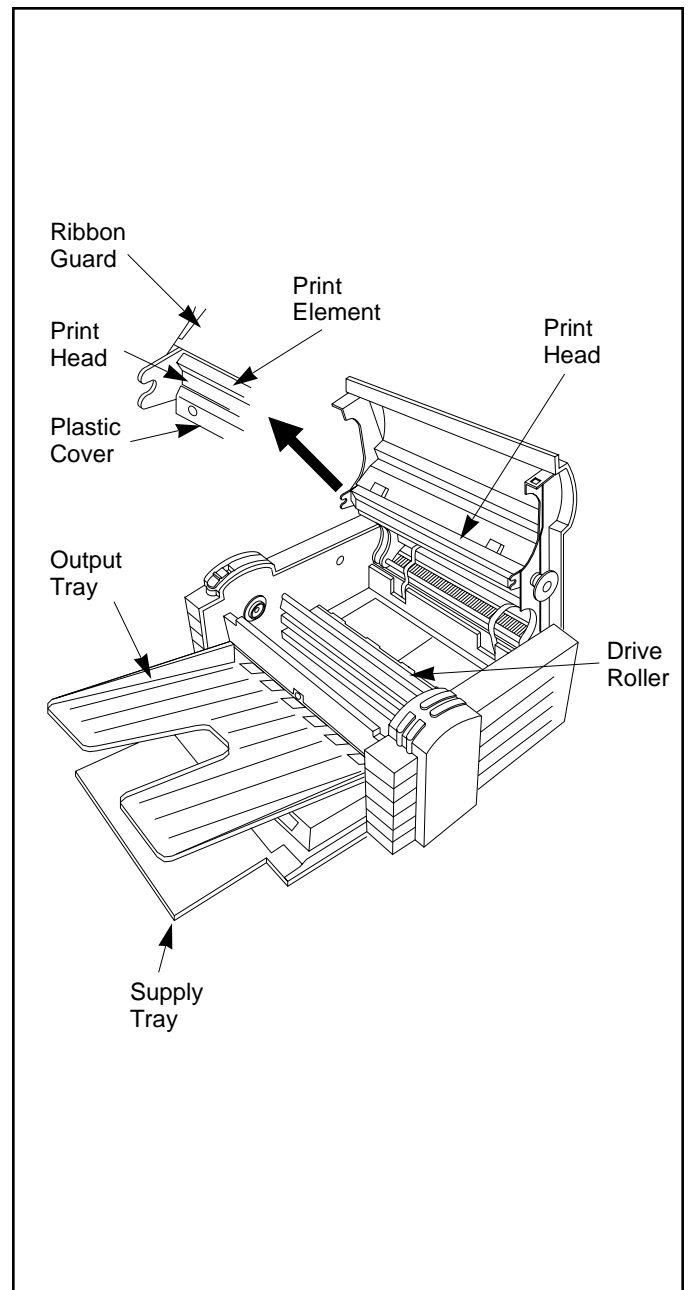
CAUTION

Unplug the printer's main power cord before performing any type of maintenance procedure. Also, never use a sharp tool or a metal object of any kind to clean the print head. You will damage the print head!

B. Standard Print Head Cleaning

This procedure is performed if you notice a streak on the page where ink was not transferred.

1. Open the printer's top cover with the Cover Release Lever.
2. Remove the Ribbon Cartridge from the printer. If you observe dust and/or other particles laying on the top surface of the ribbon, manually roll it up into the take-up roll. Occasionally, dust may settle on the top surface of the ribbon sheet and cause print quality problems.
3. Use a soft, lint-free cloth to wipe dust and any accumulated particles off the surface of the print head.
4. Re-install the Ribbon Cartridge and shut the cover. If a streak in the printout persists, perform the steps in section C, on the next page.



C. Expanded Print Head Cleaning

Perform only if you have a streak on the printed output that can't be solved by the Standard Head Cleaning procedure.

1. Open the printer's top cover with the Cover Release Lever.
2. Remove the Ribbon Cartridge from the printer.
3. Use a soft, lint-free cloth soaked lightly with isopropyl alcohol to wipe off the surface of the print head. Be extremely careful not to use too much alcohol; it must not be allowed to drip into the printer.
4. Allow the print head to thoroughly dry before re-installing the Ribbon Cartridge.
5. Re-install the Ribbon Cartridge and shut the cover. If a streak persists, Contact FARGO Technical Support for further assistance (see Section 11 for Technical Support information).

As a cleaning option, you may wish to purchase a PrimeraPro Print Head Cleaning Kit from your local dealer or from FARGO. This kit includes pre-moistened pads that are ideal for regular print head cleaning.

D. Cleaning the Printer's Case

Your PrimeraPro has a durable PVC plastic casing that should retain its luster and appearance for many years. Clean it only with a soft cloth slightly dampened with water or a mild soap. Do not use excess water or cleaning solvents of any kind. Never spray the cabinet with a cleaner. Rather, spray the cloth first and then wipe down the printer.

E. Cleaning the Inside of the Printer

As you use your PrimeraPro, dust and paper particles will accumulate inside the printer's case. These particles are attracted to the underside of the ribbon by static produced during printing and can cause voids on the printed image.

Periodically, use the following procedure to remove dust and paper particles:

1. Open the printer's top cover with the Cover Release Lever.

2. Remove the Ribbon Cartridge from the printer. (The Ribbon Cartridge should also be cleaned by wiping out each end of the cartridge with a moist cloth. This will prevent dust buildup.)

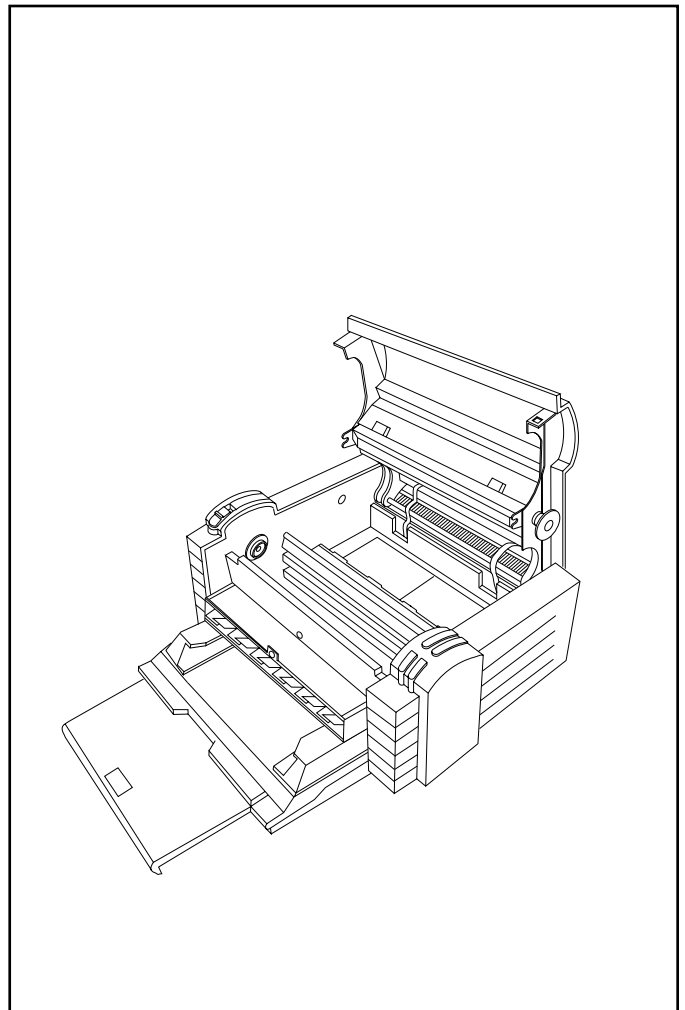
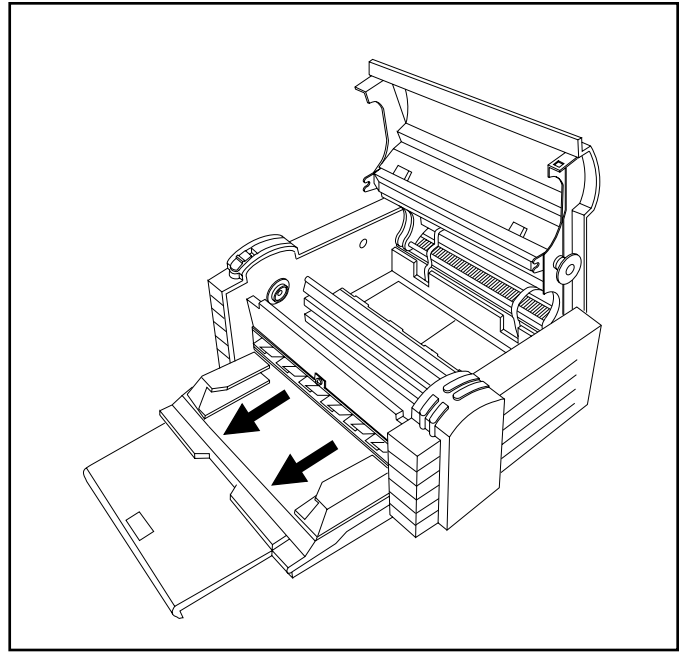
3. Remove the Paper Output Tray.

4. Remove the screw on the front of the printer, located just above the Paper Output Tray.

5. Gently pull out the Output Assembly. It will only pull out about two inches. Clean inside the opening and remove any debris that may be inside.

6. If you have access to a very small vacuum cleaner (most computer stores sell devices just for this purpose), use it to vacuum out all visible areas inside the printer. If you don't have such a device, use a soft, lint-free rag slightly moistened with isopropyl alcohol to wipe out all visible areas inside the printer's cabinet. **Be extremely careful not to let any alcohol drip inside the printer's case.**

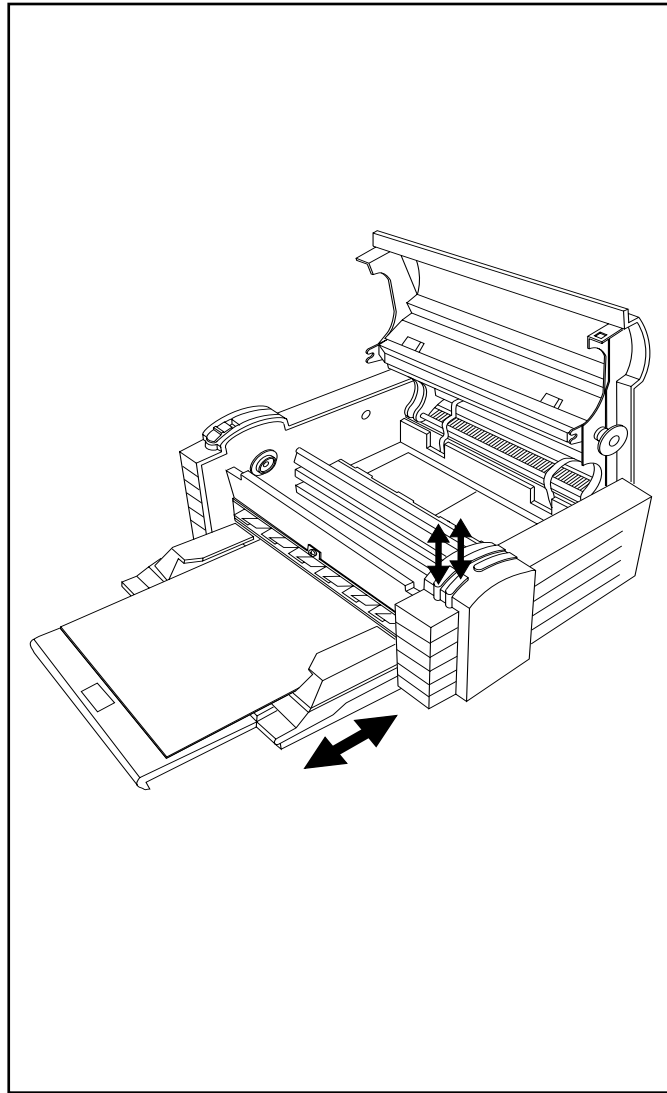
7. Re-install the Output Assembly, the Paper Output Tray, and replace the screw.



F. Clearing a Paper Jam

If a sheet of paper or transparency film becomes jammed inside the printer for some reason, remove it with the following steps:

1. Leave the power on and open the cover of the printer with the Cover Release Lever.
2. Remove the Ribbon Cartridge.
3. Press Power button to advance the paper. Press On Line button to reverse paper.
4. Turn the printer's power off and on again to clear its input buffer memory. Press the **Cancel** button (or equivalent) in your application program. Start the print over again.



G. Clearing a Ribbon Jam

If the ribbon becomes jammed in the printer's feed roller (visible when you open the printer's top cover), use the following procedure to correct the problem:

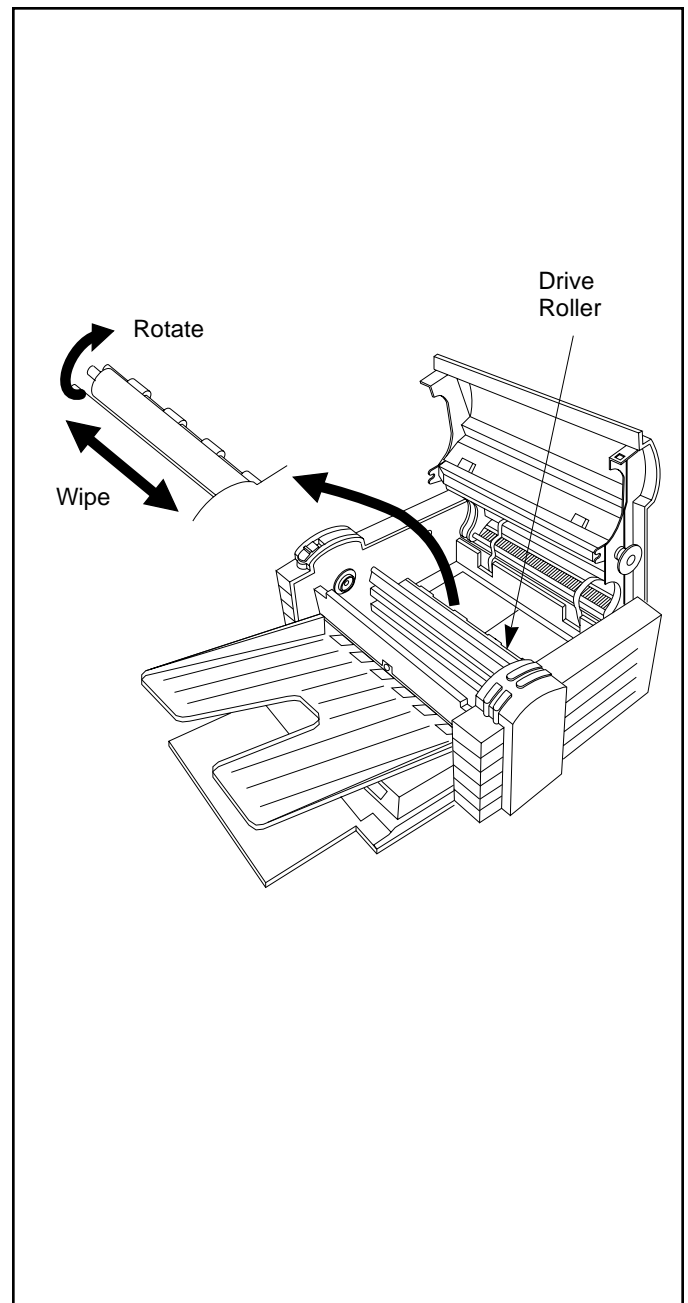
1. Leave the power on and open the cover of the printer with the Cover Release Lever.
2. Remove the Ribbon Take-Up core (the side with used ribbon on it) from the Ribbon Cartridge.
3. Firmly pull the ribbon up and out of the printer while holding down the printer's On Line button. This will rotate the drive roller backwards and eject the ribbon while you are pulling gently upwards.

4. If any ink is visible on the drive roller, clean it according to the steps in H, below.

H. Cleaning the Drive Roller

Periodically, you should clean the printer's drive roller. This helps to prevent jams and maintain uninterrupted service. Also perform this procedure if you notice any ink on the Drive Roller. Use the following steps:

1. Remove the Ribbon Cartridge.
2. Locate the Drive Roller. It is a long, black rubber roller directly underneath the print head when the printer's cover is closed.
3. Lightly moisten a clean, lint-free cloth with isopropyl alcohol.
4. Wipe the roller thoroughly. You can use the On Line and Power buttons to move the roller back and forth while you are wiping the surface clean.
5. After the roller is clean, replace the Ribbon Cartridge and close the printer's cover.



A. General Troubleshooting For PrimeraPro

If you have difficulty operating your PrimeraPro Color Printer, the troubleshooting suggestions in this section should, in most cases, solve the problem. If you still have difficulty after trying these suggestions, call FARGO's Technical Support Group. Customer and technical support representatives are available Monday through Friday, 7:00 AM to 6:00 PM Central Standard Time. Technical support is free of charge for your first call and for those calls made within the first 30-days following that first call. To contact a technical support representative, call (612) 941-0050 or FAX (612) 941-1852. You may also leave a message 24-hours a day if you would like to have a representative call you back the next business day.

If technical support is needed and it has been over 30-days since your first call, you must call 1-900-555-3274. A fee of \$10.00 per call will then be charged to your phone bill. You must be at least 18 years of age to call this number.

Technical support and printer driver upgrades can always be obtained free of charge by connecting to FARGO's Bulletin Board or to FARGO's World Wide Web Home Page. To connect to FARGO's Bulletin Board, dial (612) 942-7958. Drivers can be downloaded at speeds up to 14,400 bits per second. You can also connect to FARGO's World Wide Web Home Page at <http://www.fargo.com>.

The printer doesn't work at all.

Symptoms: nothing happens or an error message comes up in the Windows application program.

- Make sure that the power cord is plugged in securely on both ends and that the printer is turned on. Confirm power is applied by pressing the Power button on the printer. The green LED above both the Power and the On line buttons should be illuminated.
- Make certain that the printer cable is securely connected. An error message in the software application telling you that the printer is not responding is usually due to a missing or defective parallel interface cable.
- The cover is not securely latched shut.
- If your computer seems to raster the image and send it to the printer, but the printer does not react at all, you may be in need of more hard disk space for the size of your image. You should have enough space on your hard disk for double the size of the file you are trying to print.

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Troubleshooting

The On Line LED light is flashing and an error message is displayed on your computer screen.

Symptoms: LED blinking could mean one of several errors.

- If flashing fast, indicates a paper or ribbon out condition. Replace media as required. Check that paper or transparency film is pushed all the way into the printer (see NOTE #1 at the end of Section 4-F). Also, check for a paper jam. Be sure to turn the printer off and on, then cancel and restart your print job if you detect and clear a jam.
- If flashing slowly, indicates a data transmission error. For some reason, usually due to the application software or an incorrect printer driver set-up, the printer has become confused. Turn power off and on again. Then, check that the proper PrimeraPro printer driver is installed and selected. Cancel and restart your print job from the application.
- If your printer starts printing and stops, flashing the On Line light slowly, and Windows displays the message: "The printer on LPT1 is not responding", you may need to increase your Transmission Retry Value. In the Connect dialog box of the Printers option within the Control Panel, you should increase your Transmission Retry Value from 45 to 900.

The paper, transparency, or ribbon is jammed.

Symptoms: printer makes strange sounds, maybe even stops printing.

- If your dye-sublimation ribbon is sticking to your dye-sublimation paper, check that the dye-sublimation paper is loaded into the printer with the white, glossy side facing down.
- Review the proper procedures for clearing jams in Section 10.
- Check that the paper is fully inserted into the printer.

My prints have "streaks" in them.

Symptoms: scratches that travel the entire length of the print from top to bottom.

- Review the proper procedures for print head cleaning in Section 10.
- There may be a scratch or a burned out element in the print head. Contact your local dealer or FARGO for print head replacement information.

**My prints have
“blotches” (small
voids) in them.**

Symptoms: small spots on the print with no ink or different colors of ink.

- Most likely due to dust inside the printer. Review the procedures in Section 10 for cleaning the inside of the printer. Also, be sure the Ribbon Cartridge is clean and free of any dust particles.
- Defective ribbon. Check to see that ink is not missing on an unused part of the ribbon. If it is, replace ribbon.

**Print quality
overall is not
good.**

Symptoms: poor or faded print quality over the entire sheet of paper or transparency.

- Be sure you have the appropriate supplies installed. Do not use dye-sublimation ribbon or paper if you have a wax thermal transfer print option selected in your printer driver setup, or vice versa. Both the dye-sublimation option and the wax thermal transfer option require their own separate and specific set of supplies. Dye-sublimation ribbon and paper come packaged together and can only be used for dye-sublimation printing. The dye-sublimation ribbon is distinguished by its plastic cores, and the dye-sublimation paper is distinguished by its white, glossy finish. The wax thermal transfer ribbon is distinguished by its cardboard cores and can be used in conjunction with any smooth surfaced paper.
- Paper is upside down. Most papers have a good and bad print side. Be certain that you are loading paper with the print side facing down. On the dye-sublimation paper, the printable side of the paper is the white, glossy side; this side of the dye-sublimation paper should be facing down when inserted into the printer.
- Paper is not of a good enough quality; use a smooth, non-porous paper stock for wax thermal printing. Change to a smoother, shinier paper or purchase FARGO-brand wax thermal paper designed especially for PrimeraPro.
- Print head could be very dirty. Review the procedures in Section 10 for print head cleaning.
- Not enough heat (or too much heat) to properly transfer ink. Adjust the Intensity control in PrimeraPro's printer driver up or down.

My Dye-Sublimation prints look very dithered or pixelated.

Symptoms: prints do not look smooth or continuous, but rather grainy and unclear.

- Some applications have selections you must enable in order for PrimeraPro to use its own dither patterns. For best output, you should always use PrimeraPro's dither patterns. Refer to your application program's instruction manual or contact the software manufacturer for details on how such selections are enabled.
- For best photo-realistic output, you should always use high resolution 24 bit images. If scanning an image, always scan the image at a 24 bit color setting, at the same resolution at which you will be printing, and at 300 dpi. If you stretch or "blow up" a small or low resolution image, you will always get a pixelated or grainy effect when printing.

The printer's top cover won't shut.

Symptoms: something seems to be in the way and I'm afraid to push harder.

- Check that the ribbon is seated properly in the Ribbon Cartridge.
- Check that nothing did in fact fall into the printer. Then, go ahead and push slightly harder. A microswitch and the ribbon's locating cam both have to engage, and this requires some pressure as the cover is closed.

The paper feeds and acts like it's printing, but nothing is printed.

Symptoms: printer sounds like everything is fine, but no image.

- Oh-oh. You may have loaded the ribbon upside down. Open the printer's top cover and check what's happened. If you did load it upside down, you'll see lots of gooey ink all over the print head. Give the print head a *really* thorough cleaning; maybe twice (see Section 10 for print head cleaning instructions). Be careful not to damage the head.
- The ribbon may have been loaded backwards. This caused no harm. Just turn it around so that the supply end is towards the back of the printer and the take-up is towards the front.
- Check the application program. You may have sent down a request to print absolutely nothing.

The paper won't feed and the On Line LED starts blinking.

Symptoms: printer starts to make noise like everything is fine, but no paper feeds.

- Push the paper or transparencies in all the way. If inserting a stack of standard A-size paper, for example, the paper should be pushed into the printer until the head of the arrow on the fully-extended Paper Input tray is visible.
- You're trying to feed media that's too thick or too heavy. Try a lighter weight paper or transparency sheet.
- The in-feed rollers are extremely dirty. Refer to Section 10 for cleaning instructions.
- Be sure the internal paper guide, as described on page 23, is set to the proper A or A4 paper size setting.

My printing gets cut off at the bottom (or on the right side in Landscape mode).

Symptoms: the bottom part of your really great graph, chart or image is gone.

- Remember, there is an unprintable area at the bottom of all media that's approximately 1.20" (30.5mm). This is necessary so that the printer can feed the paper back and forth for color printing. Use a longer sheet of paper or transparency film to increase print area or reduce the image size from within the software program you're using.
- Check that the correct paper size and length is selected in the printer driver. Improper paper size settings will always send your image to the wrong area of the page. (See page 24 for important paper size information)
- If using the perf paper, T-shirt transfer paper, or transparencies, you need to have the paper size in the printer driver setup set to Letter Long (Windows and Macintosh) or U.S. Legal (Amiga).

Two sheets of paper (or transparency film) feed at the same time.

- Be sure to “fan” the media before loading. Static tends to attract two sheets together. This is especially true with transparency film.
- You may be using a paper that is not very smooth. Use another type.

I’ve got a really major transparency jam

- Use transparencies that have an anti-static back-coating.
- Optionally, you may wish to take each transparency off the Paper Output Tray after printing. Static causes the sheets to be “attracted” to each other and can cause a jam to occur. Use the procedures in Section 10 to remove the jammed transparency sheets.

I can’t get the paper all the way into the Paper Input Tray.

- Load at least 10 sheets of paper or transparency film at a time.
- Paper may have been stored in a moist or humid environment and has swelled. Use paper that has been stored in a temperature and humidity-controlled room.
- Be sure internal paper guide is set to proper page size. See page 23 for more paper guide information.

My prints are “scrambled” or look like bar codes.

- This signifies a data transmission error. This could be caused by a bad printer cable or port. Try switching to a different printer cable, preferably 6 feet in length.
- If using a switch box, try printing with your printer connected directly to your computer.

My 600 x 300 dpi prints are not printing properly.

Symptoms: when printing with the 600 x 300 dpi print option, entire prints are shrunk vertically or sections of the print are disproportionately re-sized.

- 600 x 300 dpi printing is achieved through a software controlled resolution enhancement process which is relatively new to the color printer industry. Unfortunately, not all of the software applications currently available have been modified to support this printing process. If you are having difficulty printing with this option, switch to the 300 x 300 dpi print option and encourage your favorite software program’s manufacturer to support 600 x 300 dpi printing. Contact FARGO Technical Support with questions.

How can I tell my printer supplies apart, and which supplies are used specifically for wax thermal transfer printing and which are used for dye-sublimation printing?

Note: Dye-sublimation and wax thermal transfer supplies are not interchangeable! Each specific set of supplies must only be used with their specific printing method.

Ribbons

- Thermal wax transfer ribbons are distinguished by their *cardboard* cores and are available in monochrome, 3-color, or 4-color ribbon types.
- Dye-sublimation ribbons are distinguished by their *plastic* cores and are available in monochrome, 3-color, or 4-color ribbon types.

Paper and Transparencies

- *Thermal wax transfer paper* comes packaged in 200 sheet reams and is available in a Standard or Premium grade. These paper stocks are simply smooth or coated paper stocks ideal for thermal wax transfer printing. The *Perf paper* is a longer, premium grade paper with tear off ends which allow for near full page wax thermal printing. *T-shirt transfer paper* is also available for thermal wax printing only. The lines on the back of the T-shirt paper denote the non-printable side of the paper.
- *Dye-sublimation paper* comes pre-packaged with the dye-sublimation ribbon and is distinguished from wax thermal paper by its white, glossy printable side and cream colored non-printable side.
- *Thermal wax transfer transparencies* are extended length sheets with perfed extensions which allow for near full page wax thermal printing. Located on the perfed extension, is a white sensing strip which the printer needs to detect each end of the transparency.
- *Dye-sublimation transparencies* are standard A (letter) or A4 length sheets with a white sensing strip at the top and bottom of the sheet. There are no perfed extensions on the dye-sublimation transparencies.

B. Troubleshooting For FARGO's Macintosh Printer Driver and Backgrounder

If you are having difficulty using the FARGO driver, run through the following check list.

An error dialog box appears when you try to print saying the printer is not ready.

- Is the printer plugged into the wall outlet? Is the Power light on? Is the printer selected in the Chooser? Is the printer connected to the printer port of the Macintosh or to the AppleTalk network? Does the printer have paper and the proper ribbon installed?

The FARGO driver indicates that it is printing, but there is no response from the PrimeraPro.

- Ensure that the **Now** option is selected in the Print dialog box when the Backgrounder is not in use. If the **Background/Later** option in the Print dialog box is selected, the driver creates a copy of the document that is processed later by the FARGO Backgrounder. If you are not using the FARGO Backgrounder, the document is stored in the printing queue and is not processed. If you accidentally select **Background/Later**, and wish the document to be printed in the foreground, delete the spool file that was created. Spool files are stored in the Spool Folder, inside the System Folder, and have an icon like this:



- As a last resort, save what you are working on, close all applications, and do a system restart. This clears the memory of the Macintosh. If you are using the FARGO Backgrounder, be sure it is opened before you open any other application. Now, try your print job again.

The FARGO driver displays an error message saying there is insufficient memory from which to print.

- Is MultiFinder turned on (applies only to *System 6*)? If so, try quitting from the application and setting the application memory size to a higher value (2Mb). Try turning MultiFinder off and re-starting the Macintosh before printing.
- Try setting the driver to **Draft** quality. Close all Desk Accessories and document windows, other than the one from which you wish to print. Turn off any options in the application that consume memory, such as "Use available memory for speed." Save what you are working on, quit from the application, and re-start to clean up the memory of the Macintosh.
- Use the FARGO Backgrounder for processing a batch print (see the "Batch Printing" section of this manual). As a last resort you should remove any INIT and CDEV files in your System Folder that you don't need.

The FARGO driver displays an error message saying there is not enough room on the disk.

- When the driver is printing in Draft or High quality, it stores the pages to be printed from the document in a temporary file. This file is usually in the System Folder and is called the "Spool File" (some applications may re-name the file or put it in a different folder). In some cases, the spool file can become very large, particularly if the images are complex, such as scanned photographs. The following points help reduce the risk of running low on disk space.
- Always start up from the hard disk. The driver creates the spool file on the current startup disk. A floppy disk will probably not have sufficient space on it.
- The driver puts all the pages to be printed into a single spool file. If you have only a little space left on the hard disk, you can print each page from the document individually, using the From and To fields in the Print dialog box.

The FARGO driver displays an error message saying that the printer cannot be found on the network.

- Make sure that the printer is visible from the Chooser and that its name is listed and selected. If it is not visible, make sure that the printer has power and is connected to AppleTalk network or the printer port of the Macintosh. Try disconnecting and re-applying power to the printer. Try connecting the printer directly to the printer port of the Macintosh.
- Make sure that the AppleTalk network is properly terminated as specified by the network manufacturer.

The foreground application is less responsive while printing in the background.

- Background printing shares the processor in the Macintosh with the foreground application. The amount of time allocated to processing the job may be adjusted with the **Preferences** command in the Admin menu of the FARGO Backgrounder. Some types of images (such as very large files) can make the Macintosh less responsive. Try increasing the memory for Backgrounder and/or the ATM font cache if this situation occurs.

Text is “jagged,” particularly at very large sizes.

- Install Adobe Type Manager, or use a *System 7* TrueType font.
- Selecting **Text Anti-Aliasing** from the **Page Setup** dialog box will make text appear more smooth. This option is only available when printing in the dye-sublimation mode.
- If you are using Adobe Type Manager, try increasing the font cache to more than 256K (use the Control Panel). Try closing other documents, and increasing the available memory for the application before printing again.

Text is “jagged,” especially at small sizes.

- If you print in draft quality using smaller type, the output will be much improved if you check **Better bitmap scaling** in the Expert dialog box.

Text is incorrectly formatted.

- Some applications have an option to enable or disable “fractional character spacing”. It is often found in a **Preferences** dialog box or as part of the **Page Setup** dialog box. It should always be selected to ensure that the driver can position text accurately.

An application prints only grey scale.

- Some applications need to have a special option selected to enable color output.

Prints are coming out black and white only, or images are garbled or won’t print at all.

- Try disabling extensions. To disable extensions, restart the Macintosh holding down the shift key or remove them from the Extensions folder and restart. Extensions that may cause a conflict would most likely offer some sort of enhancement to a printer or other output device. To isolate the extension causing the problem try reinstalling suspected extensions one at a time while printing to the PrimeraPro.

12

Technical Specifications

Printing Method:	Non-impact wax thermal transfer / dye-sublimation		
Printing Resolution:	Software-selectable, color and monochrome: Highest quality mode: 600 x 300 dpi Regular mode: 300 x 300 dpi		
Thermal Print Head			
Heating element:	Thin-film resistor		
Element layout:	Single horizontal row		
Element density:	300 dots per inch (11.3 dots / mm)		
Color Panel Order			
Color:	Yellow, Magenta, Cyan, Black (if used)		
Monochrome:	Continuous single color		
Printing Speed			
Wax:	Color: 1.5 MPP (C, M, Y) Monochrome: 2 PPM (K)		
Dye-sub:	Color: 9 to 12 MPP (C, M, Y) Monochrome: 3 MPP (K)		
Paper Feed Method:	Friction feed		
Media Size			
A4	210mm x 297mm		
A	8.5" x 11"		
A4 Long	210mm x 330mm (355mm maximum)		
A Long	8.5" x 13" (14" maximum)		
Legal	8.5" x 14" (216mm x 356mm)		
Ink Ribbon			
Wax thermal transfer:	3-Color: Y, M, C; 115 prints / roll 4-Color: Y, M, C, K; 80 prints / roll Monochrome: 360 prints / roll		
Dye-sublimation:	3-Color: Y, M, C; 25 prints / roll or 100 prints / roll 4-Color: Y, M, C, K; 50 prints / roll Monochrome: K; 100 prints / roll		
Printing Area			
Wax thermal transfer:	<u>Media Size</u>	<u>Color Print Area</u>	<u>Mono Print Area</u>
	A4	210mm x 254mm	210mm x 266mm
	A	8.5" x 9.3"	8.5" x 9.8"
	A4-long	210mm x 297mm	210mm x 297mm
	A-long	8.5" x 11"	8.5" x 11"
Dye-sublimation:	<u>Media Size</u>	<u>Color Print Area</u>	<u>Mono Print Area</u>
	A4	210mm x 254mm	210mm x 266mm
	A	8.5" x 9.3"	8.5" x 9.8"
	Legal	8.5" x 11.3" (216 x 287mm)	8.5" x 12.3" (216 x 312mm)
Paper Tray			
Wax thermal transfer:	50 Sheets Maximum 30 Sheets Maximum (Transparency Film)		
Dye-sublimation:	25 Sheets Maximum 25 Sheets Maximum (Transparency Film)		

Output Tray:	30 Sheets Maximum
Internal Font:	Letter Gothic 12 cpi (12 point); Code Page 850 Character Set
Printer Driver:	Windows 3.1 (or higher), Macintosh, Amiga
Interface:	Standard 8-Bit Parallel (Centronics-type) or Apple LocalTalk
Colors:	Up to 16.7 million
Dimensions:	13.8"W x 5.8"H x 10.2"D (17.55"D with paper tray extended); 35.05cmW x 14.73cmH x 25.9cmD (44.58cmD with paper tray extended)
Weight:	16 lbs (7 kg)
Temperature Operating:	5°C to 35°C
Storage:	-20°C to 55°C (5°C to 35°C guaranteed for Ink Ribbon; -5°C to 45°C for up to one month is normally acceptable but not guaranteed)
Humidity Operating:	20% to 80% (RH non-condensation)
Storage:	0% to 95% (RH non-condensation) (15% to 85% for Ink Ribbon)
Supply Voltage:	Engine requires 16.5 VAC at 4.5 Amps 76500, 76502, 76504 Units will operate 105 - 127 VAC 76501, 76503, 76505 Units will operate 210 - 254 VAC
Supply Frequency:	50 Hz/60 Hz
Safety:	USA — UL1950 Canada — CSA C2.2 Europe — TÜV-GS (IEC950)
EMI:	USA — FCC Class B Canada — CRC c1374, Class B Europe — CISPR 22-B and EN55022, Class B; TÜV- EMC
CE:	Self certified based on IEC 801-2,-3,-4, CISPR 22-B and IEC950 certification
Warranty:	One Year, Parts and Labor
Options and Accessories:	<ul style="list-style-type: none"> ■ Adobe Postscript Level 2. CPSI-based software RIP and Postscript interpreter ■ Ethernet Adapter: external self-powered module ■ Monochrome and dye-sublimation ribbons, paper, T-shirt transfer paper, transparency film. ■ A6-Size Accessory Kit

A

Switch Settings

The PrimeraPro Color Printer has an 8-position DIP switch located on the rear panel next to the parallel input port. These switches define a number of printer functions. The factory default settings for the switches are in the “up” or “off” position. These settings are adequate for most applications.

To change the settings, use a pointed (but not sharp) object such as a pen or pencil. Turn the printer’s power switch on and off to initialize the changes.

The tables below list all possible switch settings on the PrimeraPro Color Printer.

A. Ribbon Configuration

The PrimeraPro Color Printer can be set for two basic types of ribbons and for two basic types of page information: color or monochrome. The switch settings described here allow you to optimize your printer for a minimum amount of ribbon waste, depending upon which type of printing you do most often.

1. If you are going to use only color ribbon, leave SW1 off. If you are going to use only monochrome ribbon or both color and monochrome ribbon, turn SW1 on. Refer to the table below.

SW1	Printer Configuration	
OFF	Configuration #1	(FACTORY SETTING)
ON	Configuration #2	

SW2	Text Mode	
OFF	Disabled	(FACTORY SETTING)
ON	Enabled	

SW3	Not Used	(FACTORY SETTING IS OFF)
SW4	Not Used	(FACTORY SETTING IS OFF)

TABLE A-1: Ribbon Configuration

2. In configuration #1, when color page information is sent to the printer it will print normally. However, when monochrome page information is sent to the printer, and a color ribbon is installed, the printer will advance the ribbon to a color panel which is not yellow before printing. When monochrome information is sent to the printer, and a monochrome ribbon is

installed, the printer still assumes that there is a color ribbon installed. Therefore, the monochrome ribbon is advanced in order for the printer to verify that it is not printing on a yellow panel. In this configuration, the printer always assumes that a color ribbon is installed, even when printing monochrome information.

3. In configuration #2, when color page information is sent to the printer it will print normally. When monochrome page information is sent to the printer, the printer will not move the ribbon before printing, even if a color ribbon is installed. In this configuration, the printer always assumes that a monochrome ribbon is installed when printing monochrome information. If you often switch back and forth between color and monochrome ribbons, be sure that switch #1 is in the "down" or "on" position. This will save monochrome ribbon when printing monochrome information.

B. Character Set Configuration

PrimeraPro's built-in Letter Gothic 12 cpi character set is used mainly for DOS-based printing. Default character set is IBM's Code Page 850 (sometimes referred to as PC-850), which includes characters for most European languages. In Table A-2, different country character set selections are listed. A portion of the actual printout from PrimeraPro's self test is illustrated in Table A-3. It lists all available resident bit-mapped characters along with specific characters for each country selection.

COUNTRY	SW5	SW6	SW7	SW8	(FACTORY SETTING)
U.S.A.	off	off	off	off	
FRANCE	on	off	off	off	
GERMANY	off	on	off	off	
U.K.	on	on	off	off	
DENMARK I	off	off	on	off	
SWEDEN	on	off	on	off	
ITALY	off	on	on	off	
SPAIN I	on	on	on	off	
JAPAN	off	off	off	on	
NORWAY	on	off	off	on	
DENMARK II	off	on	off	on	
SPAIN II	on	on	off	on	
LATIN AMERICA	off	off	on	on	
KOREA	on	off	on	on	
LEGAL	off	on	on	on	
TEST MODE	on	on	on	on	(FACTORY USE ONLY)

TABLE A-2: Character Set Configuration[illegible]**TABLE A-3: Character Set Selections**

Appendix

B

Interfacing
Information

A. Introduction

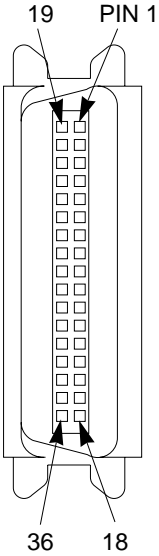
Depending on your operating environment, the PrimeraPro Color Printer is equipped with either a standard 8-bit Centronics-type parallel data communications port for use with a PC or an Amiga, or an Apple LocalTalk port for use with a Macintosh. These communication ports are the means by which the printer receives data from your computer. This section describes the pin assignments, protocol, and signal specifications for both the parallel data input port and the LocalTalk port.

B. CENTRONICS-type Parallel Interface

The Centronics-type parallel interface is the most widely used printer interface due to its simplicity, speed and standardization throughout the PC industry. The printer's parallel interface connector is a standard 36-pin Amp type with two metal-wire retaining clips. It mates with a standard PC to printer parallel cable. Always keep the interface cable under 15 feet in length if connecting to a PC or under 6 ft. in length if connecting to an Amiga.

Pin assignments are as follows:

WIRE DIAGRAM	
DB36P	DB25P
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
32	15
31	16
36	17
19 THROUGH 30	19 THROUGH 25
SHELL	SHELL



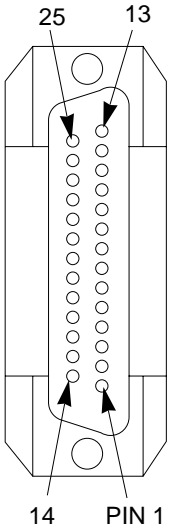


TABLE B-1: Parallel Interface Pin Assignments

C. AppleTalk Interface

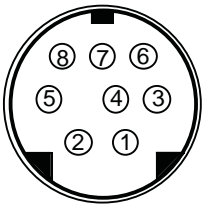
The mini 8-pin serial interface connector is the standard interface type used by Macintosh. PrimeraPro’s Apple LocalTalk (230.4 Kbps) compatible interface allows PrimeraPro to be connected either directly to the printer port of your Macintosh or to an Apple LocalTalk network.

Direct-connect AppleTalk is supported for those who wish to use a standard serial cable to directly connect PrimeraPro to a Macintosh computer. You may use the standard Apple Macintosh Peripheral-8 Cable or the equivalent when printing to PrimeraPro.

To use the printer on an Apple LocalTalk network, use the Apple LocalTalk Locking Connector Kit DIN-8 or the equivalent. Connecting to other LocalTalk networks requires a LocalTalk DIN-8 connector compatible with the particular network.

PrimeraPro supports the following AppleTalk Protocols: AppleTalk Link Access Protocol (ALAP), AppleTalk Transaction Protocol (ATP), Printer Access Protocol (PAP), Datagram Delivery Protocol (DDP), Echo Protocol (EP), Name Binding Protocol (NBP), and Routing Table Maintenance Protocol (RTMP).

Pin Assignments are as follows:



1, 2, 7:	No Connection
3:	TxD– Transmit Data (active low) from printer
4:	Signal Ground– connected to logic and chassis gnd
5:	RxD– Receive Data (active low) to printer
6:	TxD+ Transmit Data (active high) from printer
8:	RxD+ Receive Data (active high) to printer

TABLE B-2: Apple LocalTalk Interface Pin Assignments

Appendix

C

PrimeraPro's Printer Commands and Control Codes

This section contains a summary of the PrimeraPro Color Printer's commands and control codes. These commands are used mainly by those who wish to drive the printer from specific applications and from operating systems other than Windows. For more information on printer commands and control codes, contact FARGO's Technical Support Group at (612) 941-0050.

A. Standard Text Printing

Whenever standard ASCII (ASCII 32-127) data is sent to the printer and SW2 is ON, PrimeraPro will print out all such data as text. Therefore, SW2 must be ON in order to print from the DOS prompt. The resident bit-mapped font is Letter Gothic 12 cpi. A complete list of the standard characters contained in this resident font is on the self-test printout. Alternate country characters are enabled by selecting the proper DIP switches as listed in Appendix A, Table A-2. A complete listing of the characters available along with country selections are listed in Appendix A, Table A-3. *This mode is enabled only with Switch #2 ON.*

The following is a summary of printer commands for color output:

B. Wax Thermal Color Output

1. Start of Graphics: \$1B \$00 \$FF R H

R is a hexadecimal number designating a ribbon type.

\$31 = 3-color

\$32 = monochrome

\$33 = 4-color

H is a hexadecimal number designating a printer heat setting. Range is 1 to 96; \$50 is nominal. Use less than \$50 for lighter print, higher than \$50 for darker print.

\$20 = 1

\$21 = 2

~~~~~

\$7E = 95

\$7F = 96

##### 2. Start of Panel: \$86 C

C is a hexadecimal number designating a color panel.

\$30 = yellow

\$31 = magenta

\$32 = cyan

\$33 = black

##### 3. Raster Graphics Line: \$85 R bb..b 00

R is a hexadecimal number from \$00 to \$FF designating the number of times, 1 to 256, to repeat this raster line.

b is raster graphics bytes

- If the first byte is less than \$80 it represents a count of repeated bytes, i.e. \$41 \$42 denotes a \$42 repeated 65 times.
- If the first byte is greater than \$80 it represents a count of unrepeated bytes, i.e. \$83 \$41 \$42 \$43 denotes the three hexadecimal values \$41 \$42 \$43.

- The total number of repeated bytes and unrepeated bytes is 320.
- Blank raster line: \$85 R \$00 (R is repeat as described above).

#### 4. Page Eject: \$87

Example: (in hexadecimal)

1B 00 FF 31 50 86 30 85 02 41 43 83 41  
42 43 7F 00 15 00 00 87

This is for a 3-color ribbon, a heat setting of 48, a yellow panel, one set of raster bytes repeated 3 times and an end-of-page. Each set of raster bytes contains 65 \$43, a \$41 \$42 \$43, 127 \$00 and 21 \$00. \$ indicates a hexadecimal number.

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## **Printer Driver**

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